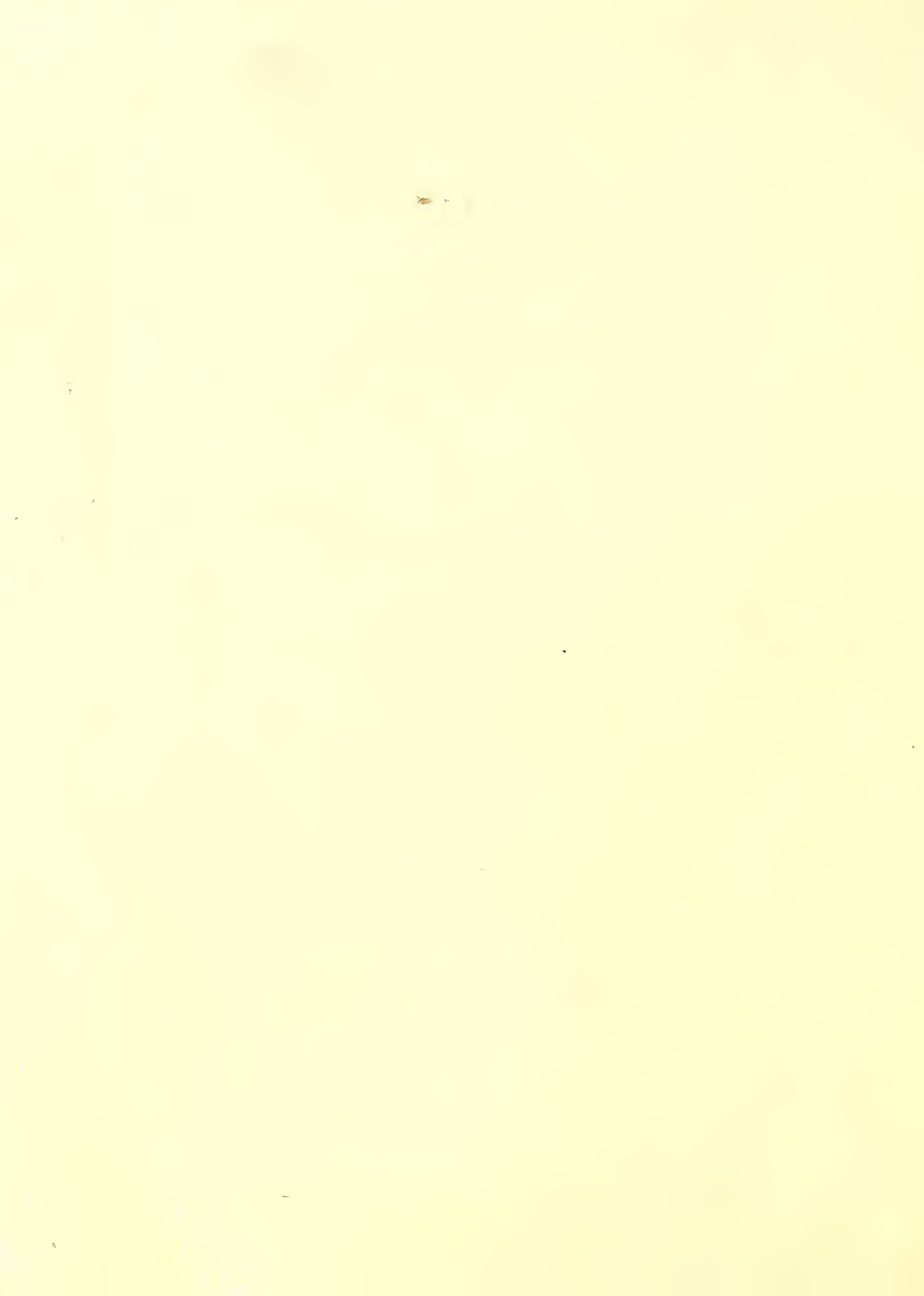


Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.





FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.



FD-11-52

December 22, 1952

WORLD PRODUCTION OF DAIRY PRODUCTS, THIRD QUARTER, 1952

The shift in utilization of manufacturing milk supplies from butter to other dairy products reported earlier continued in the third quarter of 1952. Factory butter production was down in this period, compared with a year ago, but output of all other dairy products increased.

Conditions in the Southern Hemisphere were generally favorable for milk production. In Western Europe, hot, dry weather and some reduction in cow numbers curtailed milk output in several of the major producing countries. Feed and pasture conditions in Canada, together with a slight rise in cow numbers, aided milk production, while in the United States, a reverse situation occurred.

Butter production in factories declined about 2 percent in the third quarter of 1952, compared with the same quarter of 1951. Output increased substantially in Australia, conditions in most of the important dairy States being favorable to production throughout most of this period. In New Zealand, the higher butter output was attributed to the improved producing conditions over a year earlier.

Unfavorable weather in Western Germany curtailed third quarter milk production and butter output declined. In Denmark, lower milk production was reflected in the smaller quantity utilized for butter. Output was below last year's level in the Netherlands, good market possibilities diverting large quantities of milk to the manufacture of other products.

Production of butter in Canada was higher than last year due not only to the rise in total milk production, but also to the diversion of manufacturing supplies. In the United States, lower milk production and continued high fluid milk consumption were contributing factors in the decline in butter output in this quarter.

Cheese production showed a slight gain in the period under review, compared with a year ago. Both Australia and New Zealand reported increased production in the third quarter, larger quantities from the

higher milk production being available for cheese manufacture. In Denmark and the United Kingdom, considerably larger amounts were utilized for cheese in this quarter. Less milk was available for cheese production in the Netherlands, due to the continued good demand for other dairy products.

In Canada, cheese output continued to decline, the situation created by the absence of a cheese contract with the United Kingdom and by restrictions on imports of Canadian cheese into the United States by Congressional Amendment resulted in a diversion of milk from cheese making to butter and nonfat dry solids. Cheese production in the United States in the July-September quarter of 1952 was maintained at approximately the 1951 level.

Canned milk (evaporated and condensed) production in the third quarter of 1952 rose about 3 percent over the corresponding quarter of the preceding year. In the Netherlands, output in this period was considerably in excess of comparable 1951, due to both good markets and satisfactory prices. Production also increased in the United Kingdom and Canada. Output in Australia and the United States declined slightly below that of the earlier year.

Total dried milk production was up 11 percent in the third quarter of 1952, compared with the same quarter of 1951. Substantial increases occurred in all reporting countries. In the Netherlands, the marked rise was attributed to the heavier production of dried whole milk, while in both Canada and the United States, increased output of nonfat dry milk solids accounted for the overall gain in dried milk production this quarter.

Current Conditions Abroad.

Sydney:—Early spring dairy production got off to a good start in Australia when 19 percent more milk was produced in September 1952 than for the same month a year earlier. Butter, cheese and condensary products showed corresponding increase of 31, 13, and 14 percent. The trend continued in October when butter and cheese output was 15 and 9.5 percent larger than in October 1951. Output through the summer will depend upon frequent rains, but as of early December, prospects looked rather good.

Wellington:—Rainfall has been more than adequate and pasture growth good through November. Production of butter and cheese will be correspondingly higher than last year.

Buenos Aires:-Milk output has continued upward and for November was about average for the time of year. This registers considerable improvement over last year's levels which was 30 percent below average. The good seasonal gains in milk production is expected to carry into 1953. A continuation is expected in the diversion of milk to butter from cheese and may relieve the pressure of current cheese stocks of which only about 15 percent is suitable for export to the United States market. Casein will continue to be in plentiful supply.

Ottawa:-Milk production will be maintained at the present high level and possibly a little higher. Any improvement in cheese production will come about only as a result of developing an export outlet for cheese which is unlikely in view of the high world level of production. In the meantime, creamery butter production will continue high as will the output of skim milk powder and buttermilk powder.

The Hague:-No report.

Copenhagen:-A new butter contract with the United States army in Germany has been negotiated for three million pounds at 50 cents per pound, and deliveries began November 1 and are to continue until the contract is fulfilled (about six months).

By Floyd E. Davis, based in part upon U. S. Foreign Service Reports.

DAIRY PRODUCTS: Output in principal producing and exporting countries,
3rd quarter (calendar) 1952, with comparisons

Country and Product	Average 1934-38	Total 1951	1951				1952				Third Quarter 1952/51
			3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	Percent			
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds		
Butter											
Canada	1/ 254,774	257,604	99,875	47,549	27,138	93,084	106,352		106,352	106	
United States	1/ 1,673,328	1,212,423	347,598	225,275	246,715	369,805	325,695		325,695	94	
Belgium	1/ 46,179	74,556	24,350	15,855	12,302	—	—		—	—	
Denmark	1/ 400,660	370,593	101,191	75,618	70,988	100,310	91,711		91,711	91	
France 4/	5/ 529,000	584,000	—	—	—	—	—		—	—	
Germany, Western	5/ 560,000	607,980	179,783	140,382	125,933	178,969	106,680		106,680	94	
Ireland	1/ 89,400	72,838	32,425	14,643	3,798	25,612	32,243		32,243	99	
Netherlands	1/ 201,000	184,274	56,167	34,088	25,560	51,162	48,497		48,497	86	
Norway	1/ 24,930	24,647	7,683	3,055	4,061	8,623	—		—	—	
Sweden	1/ 152,769	234,322	69,617	46,839	44,237	58,070	—		—	—	
Switzerland 8/	1/ 57,760	55,115	17,295	9,944	9,261	15,109	—		—	—	
United Kingdom	1/ 44,200	12,634	3,136	1,120	2,061	9,453	3,405		3,405	109	
Argentina	1/ 65,742	94,884	11,427	20,666	27,558	22,046	—		—	—	
Union of South Africa	1/ 27,725	65,867	11,978	17,227	19,097	13,996	—		—	—	
Australia	1/ 415,250	314,378	62,032	104,919	71,998	55,615	74,597		74,597	120	
New Zealand - total	1/ 366,912	409,752	72,576	173,936	137,536	38,326	80,640		80,640	111	
Export Gradings	1/ 322,796	356,919	54,089	153,619	120,302	28,327	61,484		61,484	114	
Cheese											
Canada	1/ 119,924	85,260	38,424	14,629	3,880	22,481	27,034		27,034	70	
United States	1/ 643,234	1,159,606	332,171	212,675	225,035	380,200	333,635		333,635	100	
Denmark	1/ 68,820	165,124	46,516	31,305	33,730	61,288	56,658		56,658	122	
France 11/	5/ 584,000	617,000	—	—	—	—	—		—	—	
Italy 11/	5/ 523,518	613,000	—	—	—	—	—		—	—	
Netherlands	5/ 200,000	265,257	86,390	53,534	38,552	98,547	85,103		85,103	98	
Norway 12/	1/ 39,067	63,929	18,361	10,319	13,913	22,835	—		—	—	
Sweden	1/ 76,059	120,007	33,227	21,437	25,097	44,621	—		—	—	
Switzerland 12/	1/ 111,729	116,964	39,220	33,605	16,428	35,913	—		—	—	
United Kingdom 4/	1/ 109,000	98,516	30,240	9,498	24,461	44,666	36,333		36,333	120	
Argentina	1/ 67,873	186,210	31,484	58,835	66,138	48,501	—		—	—	
Union of South Africa	1/ 10,195	21,092	4,170	5,695	5,902	4,810	—		—	—	
Australia	1/ 48,400	93,242	22,010	39,165	18,556	10,841	24,893		24,893	113	
New Zealand - total	1/ 210,911	228,100	32,279	92,781	61,501	18,906	35,840		35,840	111	
Export Gradings	1/ 204,110	224,411	17,881	86,739	72,809	27,015	20,045		20,045	112	

Canned milk									
Canada 13/	1/	104,335	327,844	110,213	53,071	48,399	128,544	114,674	104
United States 13/	2/	2,469,535	3,933,227	1,076,002	636,415	746,375	1,274,865	1,070,765	99
Cuba	14/	32,564	45,192	18,102	12,726	5,040	8,400	—	—
Denmark	15/	40,785	—	—	—	—	—	—	—
France	15/	28,953	—	—	—	—	—	—	—
Netherlands	15/	309,952	394,822	98,180	92,575	99,463	145,805	137,587	140
Switzerland	15/	14,198	—	—	—	—	—	—	—
United Kingdom	16/	378,560	176,512	33,062	15,232	23,565	145,062	38,886	118
Australia	17/	41,894	151,424	31,550	59,918	31,212	19,985	26,647	16/ 84
New Zealand	18/	11,273	—	—	—	—	—	—	—
Dried milk 17/									
Canada	1/	26,079	70,179	25,378	14,104	9,083	31,136	37,709	149
United States	2/	203,555	841,124	223,974	113,350	186,720	355,760	232,165	104
Belgium	14/	5,500	17,279	7,120	1,950	1,091	—	—	—
Denmark	15/	2,205	—	—	—	—	—	—	—
France	15/	7,685	—	—	—	—	—	—	—
Netherlands	15/	56,438	75,432	27,039	10,208	12,207	46,197	37,370	138
Sweden	15/	1,351	17,789	4,279	2,641	4,774	9,134	—	—
Switzerland	15/	7,187	—	—	—	—	—	—	—
United Kingdom	16/	43,098	50,086	11,917	3,494	8,423	32,525	12,096	102
Australia	17/	16,971	57,016	12,707	26,615	13,901	6,467	13,918	16/ 110
New Zealand	18/	17,429	—	—	—	—	—	—	—
1/ Average 1935-39. 2/ Revised. 3/ Total production in 1951 is estimated at 169,476,000 pounds. 4/ Total production. 5/ Estimated. 6/ Average 1935-39. 7/ Production year ending June 30. 8/ Total butter and includes butter made from the milk of sheep and goats. 9/ Production year ending August 31. 10/ Marketing year ending July 31. 11/ Total cheese, and includes cheese made from the milk of sheep and goats. 12/ Total cheese, and includes cheese made from the milk of goats. 13/ Both bulk and case goods. 14/ Less than a 5-year average. 15/ For 1937. 16/ Based on July and August production. 17/ Total dried-whole and dried-skim milk for human consumption. 18/ For 1938.									

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U. S. Foreign Service reports, and other information. December 22, 1952.



FOREIGN AGRICULTURE CIRCULAR

LIBRARY
OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D. C.
NOV 24 1952

U. S. DEPARTMENT OF AGRICULTURE

FD-10-52

October 27, 1952

INDICATED 1952 WORLD MILK PRODUCTION

The gradually increasing rate in milk production in the principal reporting dairy countries 1/ of the world in recent years appears to have been at least checked in 1952 by a number of unfavorable factors among which drought has been probably the most apparent and widespread. Increased production and marketing costs and relatively more favorable returns from other agricultural enterprise, notably meat animals, and from some non-agricultural activities, and losses from pests and disease also have been important contributing factors in some areas.

Drought has been an important deterrent to production in large areas of the United States and in southern parts of Central Europe, while production in the important Southern Hemisphere countries of Argentina, Australia, Union of South Africa and others continued to suffer from the effects of serious drought which extended into early 1952. Increased production costs include higher prices for fertilizer, labor and equipment and for oilcake in some areas.

Relatively favorable returns from beef or pork products compared with milk prevailed in the United States, the United Kingdom, Denmark, the Netherlands, Italy, and a few other countries some of which were relatively well supplied with feed. In other countries, especially in Central Europe, an above normal rate of cattle slaughter was made necessary by severe drought. Cool weather and a lack of sunshine were favorable to crop pests in areas of Northern Europe. Foot-and-mouth disease continued to take its toll, especially in France, Denmark and the Netherlands.

Although reports on production early in the year gave some indication of a maintained rate in 1952 compared with a year earlier, production failed to reach the expected summertime rate as a result of generally poor pastures. By September, however, adequate rains had improved dry pastures and generally adequate supplies of hay, forage crops and feed grains improved prospects for the closing months of the year.

1/Canada, United States, Austria, Belgium, Denmark, France, Western Germany, Ireland, Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom, Argentina, Australia and New Zealand.

In general, world milk production appears to have about stabilized at a rate first set in 1950 with only a gradual further increase in prospect. This is partially borne out by a general decline in cow numbers indicated early in 1952 prior to the drought. On the other hand, it should be noted that a gradual decline in milk cow population which has occurred since prewar has been more than offset by the effect of improved breeding, feeding and milking practices on the rate of yield per cow. Total milk production now appears to be 7 to 8 percent greater than at that time.

Production appears to have stabilized or has declined from recent high rates, in such important dairy product exporting countries as the United States, Canada, the Netherlands, Denmark, Argentina, Australia, Sweden, Switzerland and possibly Italy. Increases in production in such milk deficit or self-sufficient countries as France, the United Kingdom, Ireland and Norway also appear to have been generally checked. Further increases seem probable in Western Germany, Belgium, New Zealand and in Austria where production has not yet reached prewar quantities.

NORTH AMERICA

In North America an anticipated decline of well over a billion pounds in United States production is expected to more than offset slight increases in Canadian and Mexican production in 1952 compared with 1951.

Increased production in Canada is indicated by a slight increase in mid-year cow numbers and a further indicated increase in production per cow, the result of generally favorable pastures and feed supplies and of continued selective breeding and culling. Summertime production was affected by drought only slightly, and mid-August rains benefited both pastures and late crops.

In the United States the expected decline in total (farm and non-farm) milk production has been mainly the result of extended drought of the past summer and early fall although returns from dairying relative to those from beef-hog and other agricultural enterprises also have continued unfavorable. Little change is apparent in dairy cow numbers since the beginning of the year, and with adequate supplies of feed grains, protein concentrates and with any appreciable improvement in moisture conditions, some recovery of production may be expected in 1953.

EUROPE

In Europe where milk production has shown a general steady increase since early postwar years, 1952 production is expected to be slightly less than a year earlier, with a decrease in continental Western Europe more than offsetting a slight increase in the United Kingdom and Ireland.

In the United Kingdom an increased production per cow is expected to more than offset the indicated slight decline in mid-year cow numbers. Except for a brief dry period in July the weather has been favorable and

herds were reportedly doing well on ample early fall pastures. Although farmers have been encouraged by a recent price increase, the supply of supplemental feeds per animal unit reportedly is slightly smaller than a year earlier and 1952 production is not expected to continue quite as heavy relative to a year earlier as that indicated (up nearly 2 percent) in the first 7 months.

In Ireland a sharp increase in yield per cow, the result of generally good pastures, increased supplies of grains and concentrates and ample supplies of hay and other fodders, is expected to more than offset a gradual decline in cow numbers. Although production was significantly greater than a year earlier in the first half of 1952, general dissatisfaction with returns from milk, reflected in a sharp decline in the number of bred heifers, is expected to slow the rate of increase over 1951 during the last half of the year. Milk production in 1952 probably will not exceed that of 1950.

In Austria 1952 production is expected to show about the same increase over a year earlier as that established in the first quarter (4 2 percent). Excellent supplies of grains, concentrates and other supplementary feeds and a mid-year producer price increase is expected to more than offset the effect of a hot, dry mid-summer grazing season. Although cow numbers are expected to show only slight increase, a further increase in production per cow is expected partly as a result of favorable Government programs including the subsidized feeding of oilcakes. Austria is the only country reported which has not yet recovered its prewar rate of production of cows' milk. Both production per cow and the size of the national dairy herd are still below that of prewar.

In Belgium 1952 production is expected to increase moderately over a year earlier as the combined result of a slight increase both in cow numbers and in production per cow. A reported increase of 2 percent in January cow numbers is expected to be reduced by some culling induced by early summer drought and some further slaughter of foot-and-mouth cattle. Belgium's drought was largely ended by July, however, pastures recovered, and crops, including hay and sugar and fodder beets, reportedly were good.

In Denmark milk production appears to be declining for the second year and is now below that of prewar. This reduction is accounted for by the sharp decline in cow numbers, reflecting in part a further foot-and-mouth liquidation, which continued to mid-1952. The yield per cow, however, is expected to be nearly as great as the 1950 record. A sharp decline in milk production in the first 7 months, believed due to the generally unsatisfactory prices for butter and cheese relative to beef and pork products, is reflected in a decline of over 10 percent in the quantity of milk utilized in manufactured dairy products. Though crop and pasture conditions reportedly have been good and hay generally ample, 1952 milk production probably will be at least 5 percent less than that of 1951.

In France the postwar increase in milk production appears to have been at least interrupted in 1952 by a decline in yield per cow and a

possible slight decline in cow numbers. Production per cow is expected to decline compared with a year earlier as a result of several weeks of severe drought, the effects of foot-and-mouth disease and an inadequate supply of fall feeds. Cow numbers probably will decline as a result of the first two of these factors, although any decline will tend to be offset by an increase in the number of 1 to 2 year old heifers in early 1952.

An increase in milk production in Western Germany in 1952, reflecting a further increase in both cow numbers and yield per cow, probably will be the principal factor preventing a sharp decline in the total milk production of the reporting countries of Western Europe. Production was substantially greater than a year earlier during the first six months of 1952. Drought was detrimental mainly in the South and during the third quarter. Rains were adequate for good pastures in the North and West and fall supplies of concentrates and other feeds reportedly are generally adequate. The effect of foot-and-mouth disease was considerably less serious than in 1951.

In Italy, severe drought, especially in southern and central areas, served to check further expansion in cow numbers and production per cow, although its effect was more serious in the production of sheep's milk than cow's milk. Relatively favorable prices for meat have also served to check any further increase in the size of dairy herds and in the production of milk for human consumption. Reduced production of hay and feed grains probably will tend to check any recovery during the fall and winter months. Production of cows' milk in 1952 is expected to be slightly less than that of a year earlier but at least as great as that in 1950.

In the Netherlands, a decline in cow numbers is expected to more than offset a slight increase in production per cow, and production in 1952 is expected to decline for the second straight year. Foot-and-mouth disease caused some of the decline in cow numbers and in milk production during the first four or five months, but continued good pastures and adequate supplies of feed grains, oilcakes and root crops should result in a recovery of the average yield per cow toward the record of 8,380 pounds established in 1950. The slaughter of cattle affected by foot-and-mouth disease and the intensive use of vaccines has now eliminated the likelihood of much further immediate decline in milk production from that cause.

In Norway, milk production in 1952 is expected to be about the same as, or slightly less than, that of a year earlier. Pastures have been fairly good, but spotty, as a result of generally cold weather and below average precipitation in eastern areas. Hay and pastures have been good in the West and North and crop prospects have been generally favorable. Prices generally have not increased sufficiently relative to the cost of labor and feeds, however, and some large dairymen reportedly have started to reduce their herds.

In Sweden, mid-year cow numbers declined over 4 percent compared with a year earlier and the decline in 1952 production for the first six

months was even greater. As a result of cool cloudy weather, pastures have been only fair. Both cow numbers and milk production are expected to stabilize during the balance of the year and total production in 1952 may be about 5 percent less than that of a year earlier. Although fall feed supplies are ample and there has been a recent increase in prices to producers, the production rate is expected to leave relatively small quantities of dairy products available for export. Milk production in this country has shown little or no increase above the quantities produced before the war.

In Switzerland, the production of cow's milk is expected to be about the same as that of a year earlier, with a possible slight increase in cow numbers about offset by a lower average yield per cow. Drought, which extended into early September, depleted pastures, reduced the hay supply and made necessary the early feeding of supplements. The outlook was improved, however, by prospects for better prices for cheese in export as a result of the removal of United States restrictions on important varieties, an improvement in pastures by mid-September and a Swiss Government plan to subsidize feed imports.

SOUTHERN HEMISPHERE

With the exception of New Zealand, the predominant characteristic of production in the Southern Hemisphere is the prospect of a continued recovery from the effects of severe drought in the last half of 1951 and early 1952. Although there was some reduction in cow numbers at the beginning of 1952 and a curtailment in milk production in the early months, generally adequate moisture has since provided good pastures and feed prospects and this year's production is expected to exceed that of 1951. While this applies to Australia and Argentina, a recovery from drought is also expected in some non-reported countries including Uruguay and Brazil. In the Union of South Africa continued drought probably will prevent recovery.

In New Zealand, milk production in this fiscal year ending June 1952 established a new record, the result of generally favorable feed conditions. A further increase in total milk production in the 1952-53 season seems likely. Pasture conditions at the present time are generally excellent. There is a general feeling that the wool boom is over and farmers are returning their attention to milk production, attracted in part by the expectation of higher producer returns. There has been an increase in prices under the long-term contract for butter and cheese with the United Kingdom.

In Australia, the production of milk in 1952 is expected to show some recovery from the serious drought which sharply reduced milk production and cow numbers in the last half of 1951. Although milk production was down sharply in the first four months, pastures soon recovered following substantial rains and production in May and June was sharply above that of a year earlier. With both crop and pasture prospects favorable in the principal dairy States, it seems probable that the decline in cow numbers will be more than offset by an increase in yield per cow. While the increase in milk production over 1951 should be substantial, a recovery to the rate of milk production reached in 1949 and 1950 seems unlikely.

In the Argentine, the situation is much like that of Australia. The effects of the severe drought, which started in the last half of 1951, continued through the first quarter of 1952. As a result of general rains, however, winter pastures were better than average and ample moisture assures good spring (September-November) forage. With good producer returns in prospect as a result of the gradually increasing demand for fluid milk and favorable prices for cheese in domestic and export markets, milk production during the last two quarters of 1952 is expected to somewhat exceed that of a year earlier and may be nearly as great as in 1950. Thus, while milk production in 1952 should be somewhat greater than in 1951, it is unlikely to be as great as that of two years earlier.

This is one of a series of regularly scheduled reports on world agricultural production approved by the Office of Foreign Agricultural Relations Committee on Foreign Crop and Livestock Statistics. It is based in part upon U. S. Foreign Service reports.

MILK: Preliminary estimate of 1952 production in important
producing countries, with comparisons 1/

Country	Average 1934-38	Average 1946-50	1950	1951	1952
	Million Pounds	Million Pounds	Million Pounds	Million Pounds	Million Pounds
Canada.....	<u>2/</u> 15,284	16,844	16,449	16,392	16,720
United States.....	105,416	117,297	117,602	116,491	114,800
Austria.....	<u>3/</u> 5,602	3,726	4,354	4,453	4,540
Belgium.....	6,790	6,219	7,123	7,327	7,475
Denmark.....	<u>4/5/</u> 11,684	10,181	11,931	11,541	11,000
France.....	33,000	27,256	34,080	36,350	35,000
Germany, Western....	<u>5/6/</u> 33,069	<u>7/</u> 24,993	31,162	33,446	34,750
Ireland.....	5,090	4,800	5,296	5,000	5,200
Italy.....	<u>8/</u> 13,750	<u>9/</u> 14,628	15,000	15,500	15,250
Netherlands.....	11,180	10,109	12,723	12,500	12,350
Norway.....	<u>4/5/</u> 2,954	3,116	3,526	3,556	3,550
Sweden.....	<u>4/5/</u> 10,238	10,245	10,789	10,525	10,000
Switzerland <u>10/</u>	<u>4/</u> 6,041	5,079	5,673	5,917	5,900
United Kingdom.....	18,424	20,394	23,062	22,074	22,400
Argentina <u>11/</u>	<u>8/</u> 6,515	<u>7/</u> 7,762	8,588	7,747	8,300
Australia <u>11/</u>	<u>3/</u> 11,780	12,206	12,848	11,357	12,000
New Zealand <u>5/</u>	10,176	9,487	10,416	11,035	11,186

1/ Cows' milk. 2/ Average 1935-39. 3/ For 1934. 4/ Average 1933-37. 5/ Years ending June 30. 6/ Average 1935-38. 7/ Average 1948-50. 8/ For 1938. 9/ Average 1949 and 1950. 10/ Includes Goats' milk. 11/ Excludes milk fed to calves.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U. S. Foreign Service reports, and other information.-October 27, 1952.



Library

FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

~~SECRET~~
FD-9-52

September 22, 1952

WORLD PRODUCTION OF DAIRY PRODUCTS, SECOND QUARTER, 1952

With supplies of milk for manufacturing purposes seasonally high in most producing countries, the shifts in use from butter to other products, notably cheese and dried milk that had begun to appear earlier were more pronounced.

In Denmark, milk production was about 7 percent less than a year ago, due primarily to the decrease in cow numbers. Output in the Netherlands was considerably below that of comparable 1951, reflected in the sharp drop in deliveries to plants. Larger cow numbers and higher yield per cow in Switzerland raised milk production and deliveries above the levels of the preceding year. Although cow numbers were down in the United Kingdom, good weather and pasture conditions contributed to higher yields, and total production for the quarter was somewhat greater than in comparable 1951.

Substantial rains over most of the dairying districts of Australia in this quarter produced a good growth on pastures, and milk production increased over comparable 1951. In New Zealand, unfavorable temperatures retarded pastures and reduced milk production. Weather conditions appear to have been favorable for dairying in Canada and milk output rose over last year, while in the United States, a slight drop in cow numbers and hot weather toward the end of the quarter brought milk output below that of the preceding year.

Butter production in factories in the second quarter of 1952 was 3 percent below the comparable quarter of 1951. Output was up in Australia, where more milk was available for all purposes and that used for butter was considerably larger than a year earlier. Higher milk production in Canada increased manufacturing supplies, much of which was utilized for butter as export markets, especially for cheese, were considerably curtailed compared with those of a year earlier.

In the Netherlands, lower milk output and the channeling of large quantities from butter to other dairy products resulted in a sharp drop in butter production. Output declined in Denmark, reflecting the reduced milk production in this quarter and a diversion to other products. With

smaller supplies for manufacturing available in the United States, butter production decreased below the 1951 level. Output was down in Argentina, the production of butter and casein being less profitable than that of cheese. Butter production also was down in New Zealand and in the Union of South Africa.

Cheese production increased 3 percent over a year earlier. Output rose substantially in Switzerland, where cheese production and exports are given first priority after the demands for consumer milk have been met. Although milk production was down in Denmark, more milk was used for all manufactured products except butter, and cheese output rose considerably. Greater production and some diversion from fluid milk consumption in the United Kingdom increased the quantity for use for dairy products and cheese production was up in this quarter. Higher cheese output in both Australia and Argentina was attributed to larger supplies of manufacturing milk.

In Canada and New Zealand, cheese production declined sharply, mainly because of the diversion of milk from the manufacture of cheese to that of other dairy products. Output in the Netherlands and the United States was maintained at the level of the preceding year.

Canned milk (evaporated and condensed) production was down 2 percent in the April-June quarter of 1952, compared with the same quarter of 1951. This decline is accounted for by the sharp decrease in United States production since output increased in other reporting countries. Good market possibilities caused the diversion of large quantities of milk into canned milk manufacture in the Netherlands. The greater availability of milk for processing due to the higher production in the United Kingdom resulted in increased canned milk output in the second quarter. Production also was up in Canada.

Dried milk production for the period under review rose 13 percent over comparable 1951, with increases indicated in all reporting countries. Favorable markets and good prices accounted for the higher output in the Netherlands. In the United Kingdom, increased milk production resulted in additional supplies for manufacturing and in the quantity available for dried milk production. In both Canada and the United States, total dried milk output was considerably higher in this quarter, due to the greatly increased production of nonfat dry milk solids. The production of dried whole milk was lower in these 2 countries.

Current Conditions.

Notes:- The shortage of feeds in Switzerland because of a dry summer forced the heavier slaughter of cattle which may affect milk production in the near future. Conditions in the cheese industry seem to be promising. Butter production will be reduced to a minimum, in order to produce and export more cheese.

Copenhagen:- The weather in Denmark has benefitted pasture growth and the outlook is good.

The Hague:- Although the demand for butter in the Netherlands remained strong, good market prospects encouraged the diversion of large quantities of milk to the manufacture of condensed milk and dry whole milk, production of which is running at levels well above last year.

London:- Dry weather in the United Kingdom in July which pointed to a reduced milk production, was followed in August by ample rainfall. There is now a good supply of grass and cows are progressing well. Purchased concentrates continue to be rationed.

Buenos Aires:- Milk production in Argentina has begun its seasonal rise, with prospects for an exceptionally large volume during the remainder of 1952. Pastures and crop prospects are good.

Sydney:- Substantial rains over most of the dairying districts of Australia have improved pastures and cattle are in good condition. It is reported that, because of rising prices for dairy products and declining wool prices, dairy farmers in various sections who had turned to wool growing are now returning to the dairy industry.

Wellington:- Milk and butterfat production in New Zealand in July, the first month of the 1952-53 season got away to a good start. Pasture growth developed well and stock is in good condition.

Ottawa:- Milk production conditions during the summer have been generally satisfactory and it is believed that total milk production since May 1 is slightly in excess of a year ago. There has been a good distribution of rainfall, and pastures, in general, are good.

--By Regina M. Murray, based in part upon U. S. Foreign Service reports.

DAIRY PRODUCTS: Output in principal producing and exporting countries,
2nd quarter (calendar) 1952, with comparisons.

Country and Product	Average	Total		1951		1952		1952		Second Quarter 1952/51	
		1934-38	1951	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	Percent		
		1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds			
<u>Butter</u>											
Canada	1/	254,774	257,604	84,815	99,875	47,549	27,138	93,084		110	
United States		1,673,328	1,214,685	379,315	349,860	225,275	126,715	369,805		98	
Belgium		46,179	74,556	22,433	24,350	15,855	12,302	—		—	
Denmark		400,660	370,593	112,655	101,191	75,618	70,988	99,420		88	
France 4/	5/	529,000	584,000	—	—	—	—	—		—	
Germany, Western	5/	560,000	607,980	171,611	179,783	140,382	125,933	—		—	
Ireland		89,400	72,838	22,444	32,425	14,643	3,738	—		—	
Netherlands		201,000	184,274	61,978	56,167	34,088	25,560	44,802		72	
Norway		24,930	24,647	9,279	7,683	3,055	4,061	—		—	
Sweden		152,769	234,322	67,965	69,617	46,839	44,235	—		—	
Switzerland 8/		57,760	55,115	—	—	—	—	—		—	
United Kingdom		44,200	12,634	5,197	3,136	1,120	2,061	9,453		182	
Argentina		65,742	94,884	23,221	11,427	20,666	27,558	22,046		95	
Union of South Africa	9/	27,725	65,867	14,688	11,978	17,227	19,097	13,996		95	
Australia	7/	415,250	314,378	47,461	62,032	104,919	71,998	55,615		117	
New Zealand - total	7/	365,912	410,536	38,472	73,472	173,824	137,536	38,080		99	
Export gradings	10/	322,796	356,919	29,772	54,089	153,619	120,302	28,327		95	
<u>Cheese</u>											
Canada		119,924	85,260	27,197	38,424	14,629	3,880	22,481		83	
United States	1/	643,234	1,157,560	379,510	330,125	212,675	225,035	380,200		100	
Denmark		68,820	165,124	52,470	46,516	31,305	33,730	60,641		116	
France 11/	5/	584,000	617,000	—	—	—	—	—		—	
Italy 11/	5/	523,518	613,000	—	—	—	—	—		—	
Netherlands		200,000	265,257	87,494	86,390	53,534	38,552	87,057		100	
Norway 12/	5/	39,067	63,929	21,895	18,361	10,319	13,913	—		—	
Sweden		76,059	120,007	35,902	33,227	21,437	25,097	—		—	
Switzerland 12/		111,729	116,848	31,209	39,220	33,485	16,428	35,913		115	
United Kingdom 4/		109,000	98,516	34,496	30,240	9,498	24,461	44,666		130	
Argentina		67,873	186,210	39,306	31,484	58,835	66,138	48,501		123	
Union of South Africa	9/	10,195	21,092	4,344	4,170	5,695	5,902	4,810		111	
Australia	7/	48,400	93,240	9,910	22,010	39,165	18,556	10,841		109	
New Zealand - total	7/	210,911	227,362	26,432	32,256	92,064	70,560	19,389		73	
Export gradings	10/	204,110	224,411	38,221	17,881	86,739	72,809	27,015		71	

Canned milk														
Canada <u>13/</u>														
United States <u>13/</u>														107
Cuba														93
Denmark														
France														
Netherlands														
Switzerland														114
United Kingdom														142
Australia														
New Zealand														
Dried milk <u>16/</u>														
Canada														
United States														136
Belgium														109
Denmark														
France														
Netherlands														134
Sweden														
Switzerland														
United Kingdom														117
Australia														
New Zealand														

1/ Average 1935-39. 2/ Total production in 1951 is estimated at 169,476,000 pounds. 3/ Revised. 4/ Total production. 5/ Estimated. 6/ Average 1935-38. 7/ Production year ending June 30. 8/ Total butter and includes butter made from the milk of sheep and goats. 9/ Production year ending August 31. 10/ Marketing year ending July 31. 11/ Total cheese, and includes cheese made from the milk of goats and sheep. 12/ Total cheese, and includes cheese made from the milk of goats. 13/ Both bulk and case goods. 14/ Less than a 5-year average. 15/ For 1937. 16/ Total dried-whole and dried-skim milk for human consumption. 17/ For 1938.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U. S. Foreign Service reports, and other information.--Sept. 22, 1952.

USDA PROD. & MKTG. ADMIN.
DAIRY BR.
ATTN. E. M. NORTON
12-13-49
FD-C



FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD-3-52

August 4, 1952

INTERNATIONAL TRADE IN DAIRY PRODUCTS DECLINES IN 1951

International trade in dairy products in the 18 principal dairy products exporting countries in 1951 was characterized by a decline in all major dairy product classifications excepting canned milk (evaporated and condensed milk). By far the greatest decline was in butter, in terms of quantity, milk equivalent and value. The decline in cheese trade was very moderate, amounting to about 1 percent. The decline in dried milk products was accounted for largely by a decrease in exports from the United States, much of it reflecting a reduction in subsidized shipments of nonfat dry milk solids.

Exports from the 18 principal countries supplying dairy products, which also import some, are believed to represent a fairly close approximation to net world trade ¹/₂. The quantity of dairy products imported for consumption, some of it from other countries in this group, is believed to be in large part offset by the relatively small exports by countries not included. Data for the latter group are incomplete or not available. Hence, the following comments will relate to the total exports of these 18, unless otherwise noted.

Exports of butter in 1951, amounting to about 940 million pounds, were 10 percent less than the 1,050 million exported in 1950 and about 18 percent less than the prewar total of 1,145 million pounds.

The sharpest declines in butter exports occurred in Australia, where production was sharply curtailed by drought, and in the Netherlands, Ireland and Norway. Moderate declines in Denmark and New Zealand are believed to be due in large part to a diversion to whole milk products.

In terms of milk equivalent, 1951 butter exports represented barely two-thirds of total world trade compared with over three-fourths in the prewar period. No current data are available for exports from Iron Curtain countries which before the war accounted for an additional 175 million pounds.

¹/₂ Countries included are Canada, United States; Argentina, Austria, Belgium and Luxembourg, Denmark, Finland, France, Ireland, Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom, Australia, New Zealand and Union of South Africa.

Exports of Cheese in 1951 amounted to about 775 million pounds compared with about 785 million pounds in 1950 and represented an increase of nearly 30 percent over the prewar total of about 600 million pounds. A sharp increase in exports from the United States was explained in large part by deliveries to the United Kingdom under earlier contracts. Sharp declines occurred in exports from Canada, the Argentine and Sweden, and moderate declines occurred in shipments from Italy and Australia. Revised estimates are expected to show little change in New Zealand. The only countries other than the United States which showed significant increases, were Switzerland, Denmark and the Netherlands.

In terms of milk equivalent, exports of cheese are estimated to account for about one-quarter of total world trade as compared with less than 20 percent before the war.

Exports of canned milk (evaporated and condensed) showed a continued increase from nearly all of the principal exporting countries excepting Canada. Total exports in 1951, amounting to about 950 million pounds were about 17 percent greater than in 1950 and over 70 percent greater than the quantities exported shortly before the war. Exports from the United States, financed in part by economic aid programs, showed the greatest increase (54 million pounds), but were followed closely by an increase of about 50 million pounds in exports from the Netherlands, the leading supplier of canned milk in world markets. Moderate to significant quantitative increases were reported for Denmark, France, and Australia. New Zealand's exports showed little change from those in 1950. Slight increases also occurred in quantities shipped from Ireland, Switzerland and the United Kingdom.

Exports of dried milks declined from over 500 million pounds in 1950 to about 390 million pounds in 1951, largely as a result of a sharp reduction in the United States exports of nonfat dry milk. Compared with prewar, however, 1951 exports of dried milks were over 5 times as great. The data on dried milk include only dry whole milk and nonfat dry milk for the United States, Canada, Australia and the Netherlands, but for countries where data are not separately available, they include milk-based dietetics, dried buttermilk and related products.

Excluding the United States exports, however, there was an increase in 1951 of about 10 percent over 1950. Principal participants in this increased trade for dry milk products were the Netherlands, New Zealand, Belgium and Switzerland. Moderate increases also occurred in exports from the United Kingdom, Ireland and France. Exports from Denmark were about unchanged, while those from Canada declined sharply.

Exports of butter, cheese, canned and dried milks from the Union of South Africa all increased sharply in 1951 over 1950. Most of these shipments went to other African and nearby markets, however, and drought has reduced export prospects for this country in 1952.

The outlook for 1952 is for a further sharp decline in butter trade as importing countries achieve greater self-sufficiency, as greater use is made of butter substitutes and as there is little tendency to remove trade restrictions. Exports of cheese also are indicated by preliminary data to be declining slightly. Some further increases in total world trade in canned and dried milks is expected, however, as the rate of increase in fluid milk production has failed to keep pace with urban growth in a number of countries.

**BUTTER: International Trade in specified Countries, Average
1934-38, Annual 1950 and 1951, Preliminary**

Country	Average 1934-38		1950		1951	
	Exports	Imports	Exports	Imports	Exports	Imports
	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.
NORTH AMERICA						
Canada	1/ 6,643:1/	1,114:	1,629:	6:	544:	17,485
Mexico	2/ 1/	172:	2/ :	98:	2/ :	87
Panama, Republic of	-- :	1,799:	-- 3/	1,275:	-- 3/	680
United States	1,152:	9,307:	3,215:	10:	18,453:	59
Cuba	4/ 610:4/	23:	-- :	1,658:	-- :	2,570
Netherlands Antilles	-- :	452:	-- 3/	1,500:	-- 3/	500
Trinidad and Tobago	-- :	1,788:	-- 3/	1,500:	-- 3/	900
SOUTH AMERICA						
Argentina	5/ 18,823:5/	64:	19,912:	-- :	17,950:	--
Brazil	9:	-- :	-- :	-- :	-- 3/	1,400
Chile	36:	64:	-- :	1,455:	-- :	2,862
Colombia	2:	38:	-- :	43:	-- :	6/
Peru	2/ :	311:	-- :	1,303:	-- :	6/
Venezuela	-- :	798:	-- :	8,488:	-- 3/	3,900
EUROPE						
Austria	5,980:	73:	7:	1,101:	2/ :	1,742
Belgium and Luxembourg	68:	9,930:	37:	45,653:	13:	43,869
Czechoslovakia	754:	1,918:	7/ :	7/ :	7/ :	7/
Denmark	328,573:	37:	338,175:	-- :	303,026:	--
Estonia	26,378:	-- :	8/ :	8/ :	8/ :	8/
Finland	9/ 24,467:9/	13:	2/ :	4,409:	1,638:	12,447
France	8,932:	3,640:	3,907:	41,396:	3,739:	30,055
Germany, Western	-- 3/	55,115:	224:	100,661:	11:	57,708
Greece	2/ :	860:	-- :	57:	-- :	--
Hungary	9,118:	-- :	7/ :	7/ :	7/ :	7/
Ireland	51,843:	448:	6,901:	-- :	505:	11,222
Italy	1,067:	2,249:	198:	9,295:	-- :	41,142
Latvia	40,774:	-- :	8/ :	8/ :	8/ :	8/
Lithuania	30,390:	-- :	8/ :	8/ :	8/ :	8/
Netherlands	109,586:	356:	142,417:	18:	119,097:	115
Norway	726:	2:	9,512:	-- :	6,244:	--
Poland and Danzig	18,664:	2:	7/ :	7/ :	7/ :	7/
Portugal	141:	229:	626:	441:3/	435:	2/
Rumania	217:	-- :	7/ :	7/ :	7/ :	7/
Spain	10/ 21:10/	111:	-- :	10:	-- :	13
Sweden	50,547:	353:	31,678:	-- :	58,446:	2
Switzerland	7:	2,033:	4:	20,708:	3:	6,817
United Kingdom	1,367:	1,074,727:	-- :	750,971:	-- :	690,345
Yugoslavia	282:	-- :	44:	-- :	16:	11,045
USSR (Europe & Asia)	46,486:	401:	7/ :	7/ :	7/ :	7/
ASIA						
British Malaya	11/ 571:	4,078:	-- 3/	2,600:	-- 3/	1,600
Ceylon	11/ :	963:	-- 3/	1,700:	-- 3/	1,300
Hong Kong	11/ :	-- :	-- 3/	2,300:	-- 3/	1,100
India	11/ 4,142:	6,175:	-- 3/	1,300:	-- 3/	1,000
Indonesia	11/ :	12,352:	-- 3/	800:	-- 3/	100
Israel	-- :	4,826:	-- 3/	200:	-- 3/	1,000
Japan	12/ 562:	141:	-- 3/	500:	-- 3/	500
Pakistan	11/ :	-- :	-- 3/	600:	-- 3/	500
Rep. of the Philippines	-- :	1,566:	-- 3/	1,100:	-- 3/	400
AFRICA						
Algeria	11:	4,336:	-- 3/	5,400:	-- 3/	3,600
Belgian Congo	11/ 13:	800:	-- 3/	900:	-- 3/	700
Egypt	11/13/ 119:	1,140:	-- 3/	1,500:	-- 3/	2,600
Morocco	15:	3,807:	-- 3/	3,000:	-- 3/	2,600
Union of South Africa	14/ 6,192:14/	3,291:	963:	9,798:	5,143:	9,194
OCEANIA						
Australia	220,151:	2:	183,370:	2/ :	75,861:	2/
New Zealand	308,895:	2:	307,776:	-- 3/	300,549:	--

See footnotes at end of last table.

CHEESE: International Trade in Specified Countries, Average
1934-38, Annual 1950 and 1951, Preliminary

Country	Average 1934-38		1950		1951	
	Exports	Imports	Exports	Imports	Exports	Imports
	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.
NORTH AMERICA						
Canada	1/ 79,700:	1/ 1,342:	63,110:	10,160:	30,653:	11,688
Mexico	15:	895:	1:	936:	2/ :	1,014
Panama, Republic of	-- :	348:	-- :3/	700:	-- :3/	500
United States	1,260:	54,279:	47,490:	56,189:	79,640:	52,335
Cuba	13:	428:	-- :	1,647:	-- :	3,150
Netherlands Antilles	2:	611:	-- :3/	1,100:	-- :3/	1,200
Trinidad and Tobago	-- :	600:	-- :3/	1,400:	-- :3/	1,400
SOUTH AMERICA						
Argentina	3,406:	110:	13,534:	-- :	5,681:	--
Brazil	4:	362:	-- :	7/ :	-- :3/	30
Chile	62:	48:3/	8:	2:	11:	20
Colombia	2:	37:	-- :	9:	-- :	6/
Peru	-- :	688:	-- :	683:	-- :	6/
Venezuela	13:	1,235:	-- :	7,865:	-- :3/	3,600
EUROPE						
Austria	6,720:	1,818:	1,552:	1,597:	733:	1,642
Belgium and Luxembourg	344:	50,563:	443:	65,386:	1,018:	69,939
Czechoslovakia	1,909:	2,706:	7/ :	7/ :	7/ :	7/
Denmark	18,067:	33:	87,000:	67:	101,132:	42
Estonia	324:	2:	8/ :	8/ :	8/ :	8/
Finland	11,651:	31:	17,196:	-- :	17,637:	--
France:	25,039:	30,867:	36,513:	51,603:	38,688:	20,324
Germany, Western	-- :3/	22,000:	4,940:	96,214:	3,871:	93,208
Greece	621:	800:	-- :	12,266:	-- :	6,430
Hungary	862:	15:	7/ :	7/ :	7/ :	7/
Ireland	1,509:	60:	985:	133:	901:	76
Italy	53,219:	9,669:	40,155:	13,576:	33,565:	25,106
Latvia	132:	-- :	8/ :	8/ :	8/ :	8/
Lithuania	1,318:	2:	8/ :	8/ :	8/ :	8/
Malta and Gozo	-- :	1,647:	-- :3/	2,400:	-- :3/	1,700
Netherlands	132,358:	934:	154,101:	534:	160,199:	681
Norway	4,111:	338:	2,086:	208:	2,653:	119
Poland and Danzig	1,360:	317:	7/ :	7/ :	7/ :	7/
Portugal	143:	386:	722:	13:3/	750:	--
Rumania	139:	90:	7/ :	7/ :	7/ :	7/
Spain	10/ 117:10/	2,502:	-- :	14:	-- :	535
Sweden	625:	2,473:	14,405:	2,921:	4,429:	4,021
Switzerland	41,678:	3,924:	32,916:	4,083:	41,094:	4,293
United Kingdom	2,987:	319,028:	-- :	344,949:	-- :	435,105
Yugoslavia	4,169:	55:	26:	-- :	153:	--
USSR (Europe & Asia)	84:	816:	7/ :	7/ :	7/ :	7/
ASIA						
British Malaya	22:	313:	-- :3/	700:	-- :3/	1,200
Ceylon	-- :	220:	-- :3/	500:	-- :3/	700
Hong Kong	-- :	-- :	-- :3/	400:	-- :3/	700
India	4:	1,204:	-- :3/	600:	-- :3/	900
Israel	33:	2,138:	-- :3/	4,000:	-- :3/	2,100
Japan	-- :	159:	-- :3/	200:	-- :3/	600
Pakistan	-- :	-- :	-- :3/	400:	-- :3/	100
Rep. of the Philippines	-- :	895:	-- :3/	500:	-- :3/	500
Syria and Lebanon	553:	917:	820:3/	2,900:	75:3/	3,100
AFRICA						
Algeria	82:	10,833:	-- :3/	18,000:	-- :3/	21,000
Belgian Congo	4:	337:	-- :3/	500:	-- :3/	600
Egypt 13/	5/ 82:5/	7,269:	-- :	8,735:	-- :3/	8,800
Gold Coast	-- :	117:	-- :3/	400:	-- :3/	200
Morocco	11:	3,845:	-- :3/	5,800:	-- :3/	6,500
Union of South Africa	14/ 1,465:14/	496:	130:	178:	594:	345
OCEANIA						
Australia	21,750:	104:	48,162:	147:	43,040:3/	378
New Zealand	194,000:	2:	223,776:	-- :3/	212,850:	--

See footnotes at end of last table.

**CANNED MILK (Condensed and Evaporated): International Trade in Specified
Countries, Average 1934-38, Annual 1950 and 1951 Preliminary**

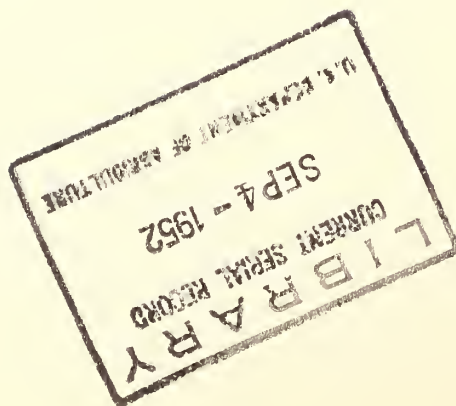
Country	Average 1934-38		1950		1951	
	Exports	Imports	Exports	Imports	Exports	Imports
	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.	1,000 lbs.
NORTH AMERICA						
Canada	:1/ 19,755	:1/ 25	: 37,456	: 15	: 29,905	: 20
Mexico	: --	:1/ 614	: --	: 148	: --	: 117
Panama, Rep. of	: --	: 4,327	: --	:3/ 3,700	: --	:3/ 4,300
United States	: 33,837	: 452	: 178,044	: 369	: 232,222	: 2
Cuba	: --	: 4,691	: --	: 30,918	: --	: 43,470
Netherlands Antilles	: --	: 3,060	: --	:3/ 6,000	: --	:3/ 6,200
SOUTH AMERICA						
Argentina	: 46	: 311	: 1	:7/	: --	: --
Peru	: --	:15/	: --	: 14,954	: --	:6/
EUROPE						
Austria	: 15/	: 15/	: 2	: 1,220	: --	: 1,309
Belgium and Luxembourg	: 2,202	: 4,255	: 271	: 67,340	: 452	: 42,564
Czechoslovakia	:16/ 1	:16/ 307	:7/	:7/	:7/	:7/
Denmark	: 40,439	: --	: 86,825	: --	: 99,401	: --
France	:17/ 11,277	: 2,955	: 26,400	: 4,043	: 36,532	: 2,832
Germany, Western	:7/	:7/	:15/	:15/	:15/	:15/
Greece	: --	: 4,309	: --	: 64,293	: --	: 41,304
Ireland	:5/ 12,936	:5/ 60	: 18,589	: --	: 19,421	: --
Italy	:17/ 3,301	: 344	: --	: 24,370	: --	: 2,709
Netherlands	: 356,087	: 77	: 336,750	: 148	: 386,800	: 24,000
Norway	: 4,667	: 67	: 108	: 10	: 88	: --
Spain	:18/ 26	:18/ 28	: --	: 21	: --	: 19
Sweden	:16/ 115	:16/ 18	: 3,592	: 2	: --	: --
Switzerland	: 12,987	: 9	: 4,696	: 1,403	: 5,806	: 1,266
United Kingdom	: 36,002	: 199,204	: 19,445	: 60,500	: 21,295	: 114,436
ASIA						
Burma	: --	:16/ 19,945	: --	:3/ 14,000	: --	:3/ 17,000
British Malaya	: 9,000	: 74,000	: --	:3/ 66,000	: --	:3/ 66,000
Ceylon	: --	:7/	: --	:3/ 8,700	: --	:3/ 11,000
Hong Kong	: --	:7/	: --	:3/ 24,000	: --	:3/ 21,000
India	: --	:16/ 6,440	: --	:3/ 24,000	: --	:3/ 23,000
Indonesia	: --	:7/	: --	:3/ 47,000	: --	:3/ 50,000
Israel	: --	: 2,000	: --	:3/ 1,200	: --	:3/ 600
Japan	: 9,800	: 1,300	: --	:3/ 2,600	: --	:3/ 900
Pakistan	: --	:7/	: --	:3/ 7,200	: --	:3/ 5,000
Rep. of the Philippines	: --	: 40,643	: --	:3/ 91,000	: --	:3/ 117,000
Siam	: --	: 21,731	: --	:3/ 37,000	: --	:3/ 48,000
AFRICA						
Algeria	: --	:17/ 5,900	: --	:3/ 9,300	: --	:3/ 11,000
Belgian Congo	: --	:7/	: --	:3/ 1,300	: --	:3/ 1,300
Egypt	: --	:16/ 96	: --	:3/ 2,700	: --	:3/ 6,300
Gold Coast	: --	:7/	: --	:3/ 6,300	: --	:3/ 5,800
Morocco	: --	:17/ 4,000	: --	:3/ 6,900	: --	:3/ 6,700
Union of South Africa	: --	: 3,105	: 615	: 1,317	: 1,964	: 233
OCEANIA						
Australia	: 15,392	: --	: 75,150	:2/ :3/	: 91,553	: --
New Zealand	: 6,156	: --	: 24,284	: -- :3/	: 24,000	: --

See footnotes at end of last table.

DRIED MILK 19/: International Trade in Specified Countries, Average
1934-38, Annual 1950 and 1951, Preliminary

Country	Average 1934-38		1950		1951	
	Exports	Imports	Exports	Imports	Exports	Imports
	: 1,000 lbs.:	: 1,000 lbs.:	: 1,000 lbs.:	: 1,000 lbs.:	: 1,000 lbs.:	: 1,000 lbs.:
NORTH AMERICA	:	:	:	:	:	:
Canada	: <u>1/</u> 5,580:	: <u>1/</u> 431:	: 18,346:	: 850 :	: 11,136:	: 7,127
Mexico	: -- :	: 466:	: -- :	: 9,425 :	: -- :	: 12,621
Panama, Republic of	: -- :	: 305:	: -- : <u>3/</u>	: 2,000 :	: -- : <u>3/</u>	: 1,500
United States	: 4,804:	: 5,055:	: 292,000:	: 2,526 :	: 167,209:	: 10,028
Cuba	: -- :	: <u>2/</u> :	: -- :	: 3,120 :	: -- :	: 3,898
Netherlands Antilles	: -- :	: <u>7/</u> :	: -- : <u>3/</u>	: 1,100 :	: -- : <u>3/</u>	: 1,100
Trinidad and Tobago	: -- :	: <u>7/</u> :	: -- : <u>3/</u>	: 800 :	: -- : <u>3/</u>	: 800
SOUTH AMERICA	:	:	:	:	:	:
Argentina	: <u>1/</u> 97:	: -- :	: 295:	: -- :	: -- :	: --
Brazil	: <u>16/</u> 2: <u>16/</u>	: 172:	: -- :	: 3,186 :	: -- : <u>3/</u>	: 10,000
Peru	: -- :	: 7,833:	: -- :	: 1,554 :	: -- :	: <u>6/</u>
Venezuela <u>20/</u>	: -- :	: 1,807:	: -- :	: 67,124 :	: -- :	: 70,864
EUROPE	:	:	:	:	:	:
Austria	: <u>20/</u> 428: <u>20/</u>	: 406:	: 9:	: 2,256 :	: -- :	: 1,063
Belgium and Luxembourg	: <u>21/</u> 41: <u>21/</u>	: 7,741:	: 952:	: 13,810 :	: 5,985:	: 17,628
Czechoslovakia	: -- :	: 154:	: <u>7/</u> :	: <u>7/</u> :	: <u>7/</u> :	: <u>7/</u>
Denmark	: 594:	: -- :	: 19,682:	: 611 :	: 19,082:	: 485
France	: -- :	: 2,168:	: 1,962:	: 9,273 :	: 2,985:	: 8,993
Germany, Western <u>20/</u>	: <u>7/</u> :	: <u>7/</u> :	: 20,124:	: 16,939 :	: 34,500:	: 2,476
Greece	: -- :	: 209:	: -- :	: 27,969 :	: -- :	: 3,989
Ireland	: 627:	: 213:	: 5,853:	: 1,007 :	: 7,442:	: 504
Netherlands	: 37,223:	: 111:	: 36,413:	: 6,883 :	: 44,897:	: 7,531
Norway	: 10:	: 90:	: 25:	: 20 :	: 44:	: 82
Spain	: <u>18/</u> 14: <u>18/</u>	: 375:	: -- :	: 11 :	: -- :	: 104
Sweden	: -- : <u>16/</u>	: 864:	: 15,320:	: -- :	: 9,006:	: --
Switzerland	: <u>22/</u> 3,036:	: -- :	: 4,694:	: 4,640 :	: 6,629:	: 3,472
United Kingdom	: -- :	: 30,859:	: 3,519:	: 75,557 :	: 5,084:	: 71,821
ASIA	:	:	:	:	:	:
Burma	: -- :	: <u>7/</u> :	: -- : <u>3/</u>	: 1,000 :	: -- : <u>3/</u>	: 500
British Malaya	: -- :	: 643:	: -- : <u>3/</u>	: 3,000 :	: -- : <u>3/</u>	: 2,400
Ceylon	: -- :	: <u>7/</u> :	: -- : <u>3/</u>	: 2,300 :	: -- : <u>3/</u>	: 1,700
Hong Kong	: -- :	: <u>7/</u> :	: -- : <u>3/</u>	: 2,200 :	: -- : <u>3/</u>	: 1,600
India	: -- :	: 1,525:	: -- : <u>3/</u>	: 13,000 :	: -- : <u>3/</u>	: 33,000
Indonesia	: -- :	: <u>7/</u> :	: -- : <u>3/</u>	: 6,500 :	: -- : <u>3/</u>	: 2,100
Israel	: -- :	: 1,268:	: -- : <u>3/</u>	: 16,000 :	: -- : <u>3/</u>	: 12,000
Japan	: <u>12/</u> 613:	: 700:	: -- : <u>3/</u>	: 62,000 :	: -- : <u>3/</u>	: 39,000
Rep. of the Philippines	: -- : <u>1/</u>	: 735:	: -- :	: 5,888 :	: -- : <u>3/</u>	: 6,000
Siam	: -- :	: <u>7/</u> :	: -- : <u>3/</u>	: 4,600 :	: -- : <u>3/</u>	: 900
AFRICA	:	:	:	:	:	:
Belgian Congo	: -- :	: <u>7/</u> :	: -- : <u>3/</u>	: 2,300 :	: -- : <u>3/</u>	: 2,400
Egypt	: -- : <u>16/</u>	: 38:	: -- :	: 1,258 :	: -- : <u>3/</u>	: 2,000
Morocco	: -- :	: <u>7/</u> :	: -- : <u>3/</u>	: 300 :	: -- : <u>3/</u>	: 1,700
Union of So. Africa	: <u>16/</u> 7: <u>16/</u>	: 724:	: 94:	: 96 :	: 278:	: 43
OCEANIA	:	:	:	:	:	:
Australia	: 3,324:	: 299:	: 41,678:	: 229 :	: 37,946: <u>3/</u>	: 24
New Zealand	: 16.111:	: -- :	: 66.700:	: -- :	: 72.000:	: --

1/ Average for 1935-39. 2/ Less than 500 pounds. 3/ Based on incomplete data or exports by country of destination, as reported by major supplying countries. 4/ Average for 1936-38. 5/ Average for 1934-37. 6/ Incomplete. 7/ Not available. 8/ Incorporated in Union of Soviet Socialist Republics on August 3, 1940. 9/ For 1934. 10/ Average for 1934 and 1935. 11/ Includes Ghee. 12/ Average for 1935-38. 13/ Does not include trade with Anglo-Egyptian Sudan. 14/ Years ending August 31. 15/ Included with dried milk. 16/ For 1938. 17/ Includes dried milk. 18/ For 1935. 19/ Includes dried skim milk. 20/ Includes canned milk. 21/ Average for 1937-39. 22/ For 1939.





FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD 7-52

June 29, 1952

WORLD PRODUCTION OF DAIRY PRODUCTS, FIRST QUARTER, 1952

Over-all factory production of dairy products declined slightly in the first quarter of 1952 in many of the important producing countries of the world compared with the first quarter of 1951, according to information available to the Office of Foreign Agricultural Relations. In many European countries, milk production was slightly below the level of the earlier year. The decline in Denmark and the Netherlands was due partly to reduced feeding of oil-cakes because of higher prices, partly to the effects of foot-and-mouth disease, and partly to higher farm operating costs.

In Sweden, the high price of feed was a factor in the lower milk production during the first three months of 1952, while in Switzerland, smaller yields and reduced imports of certain concentrated feeds because of the prevalence of foot-and-mouth disease abroad were the contributing causes for the decline in milk production there in the first quarter. Widespread cold weather and lower cow numbers curtailed milk production in the United Kingdom. An increase in cow numbers and in production per cow in Western Germany raised milk production for the quarter well above the corresponding quarter of 1951.

Unfavorable weather which dried off pastures resulted in a sharp decline in production in Argentina and Australia. Conditions for dairying continued favorable in New Zealand and milk production in the first quarter was higher than that of a year ago.

In this Hemisphere, the output of milk in Canada was slightly higher, that of the United States slightly lower than in the first quarter of 1951.

Butter production in factories in the first quarter of 1952 was approximately 6 percent below the corresponding quarter of 1951. Output in Western Germany increased in this period compared with the same quarter a year earlier, reflecting the larger proportion of the increased milk production that was utilized for manufacturing at a time when fresh milk sales were down. In Denmark, the Netherlands, Switzerland and the United Kingdom, butter production in the January-March quarter dropped below the 1951 level due to the decrease in total milk production as well as to the diversion of manufacturing milk to other more profitable dairy products. Weather and feed conditions were good in Ireland in the first quarter, and both milk and butter production were higher than in the same period a year earlier.

Lower milk production in Argentina, together with a shift in utilization, reduced butter output. In Australia, decreased milk production resulted in smaller manufacturing milk supplies and butter production for the quarter dropped sharply. Butterfat production continued at a high level in New Zealand, resulting in a butter output considerably in excess of the earlier year.

Milk production in Canada was somewhat higher than a year ago. Butter absorbed the bulk of the additional milk. In the United States, continuing high fluid milk consumption left less milk available for manufacturing than in the previous year, and butter production for the quarter was down.

Over-all cheese output in the opening quarter of 1952 was 3 percent below comparable 1951. Gains were reported in the Netherlands, Switzerland and the United Kingdom where cheese plants continued to receive a large portion of the milk allotted to the manufacturing of dairy products. Cheese production declined in other European countries, largely due to decreased milk production in the quarter.

A substantial increase in cheese production in Argentina was accomplished at the expense of butter, but in New Zealand, the reverse occurred. In Australia, the decrease in cheese was relatively less than that for butter.

In Canada, the diversion of milk to butter production and also the United Kingdom's decision not to renew the cheese contract with Canada were the principal factors in the lower cheese production of the first quarter. With less milk available for manufacturing in the United States, output of cheese was somewhat smaller than in the previous year.

Canned milk production declined approximately 10 percent in the first quarter of 1952, as compared with the same quarter of the preceding year. The Netherlands and Canada were the only countries in which canned milk output continued well above the 1951 level. Significantly smaller quantities were produced in the United Kingdom and Australia. Production in the United States in the first quarter declined, due to the sharp drop in the output of evaporated milk.

Total dried milk production in the January - March quarter of 1952 was up 8 percent over the corresponding quarter of 1951. A substantial increase in dried whole milk output accounted for the marked rise in over-all dried milk production in the Netherlands, whereas in Australia, Canada and the United States the rise was attributed to the higher production of non-fat dry milk solids.

Current Conditions Abroad.-

Copenhagen:- Grazing conditions in Denmark at present are favorable and some improvement in milk production is indicated, although it has not yet reached last year's level.

The Hague:-While the foot-and-mouth disease outbreak in the Netherlands appears to be under control, nevertheless its effects probably will be reflected in the lower milk production in the first half of 1952.

Paris:-With some increase in cow numbers in France and an excellent feed supply, production of dairy products in 1952 probably will be higher than in 1951.

Bonn:- Steadily increasing cow numbers in Western Germany, improved breeding and feeding practices, and the marked abatement in foot-and-mouth disease are expected to result in higher milk production in 1952, compared with a year earlier.

London:-Pastures in the United Kingdom are developing well and are reported to be providing more grass than usual. The feed situation generally has been satisfactory and animals are well fed, although purchased concentrates are still rationed.

Dublin:-The rationing of creamery butter in Ireland is to cease on July 4. The ration has remained unchanged since May, 1949, at 8 ounces per person per week, but its maintenance at that level necessitated imports in 1951 and 1952.

Buenos Aires:-Milk production in Argentina in 1952 is expected to exceed last year's. Prices are high and are expected to remain encouraging.

Sydney:- Conditions for production in Australia have improved. Pastures in Queensland and New South Wales are recovering rapidly following the very long drought in those States. Milk production for the Commonwealth as a whole probably will come close to last year's level.

Wellington:- Large quantities of hay and silage are reported in New Zealand. These should bring cows through the winter in average condition, unless the winter weather is more severe than normally expected.

Ottawa:- Ample concentrates are available in Canada. Milk production in 1952 should increase substantially over last year. It is generally felt that most of the surplus milk will go in to butter manufacture, particularly if foreign markets can be found for the skim milk powder that will be manufactured in conjunction with this product.

Washington:- Pasture conditions recently have been generally better than a year earlier. With continued good pasture feed supplies, milk production for the year 1952 probably will be about 115 billion pounds, compared with 115.6 billion pounds in 1951.

- By Regina M. Murray, based in part upon U. S. Foreign Service Reports.

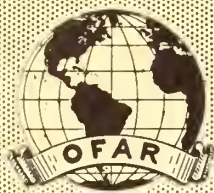
DAIRY PRODUCTS: Factory output in principal producing and exporting countries,
1st quarter (calendar) 1952, with comparisons

Country and product	Average 1934-38	Total 1951	1951				1952		First Quarter 1952/51 Percent
			1st quarter 1,000 pounds	2nd quarter 1,000 pounds	3rd quarter 1,000 pounds	4th quarter 1,000 pounds	1st quarter 1,000 pounds		
Butter									
Canada.....1/	254,774	257,604	25,365	84,815	99,875	47,549	27,138	107	
United States.....	1,673,328	1,214,685	260,235	379,315	349,860	225,275	246,715	95	
Belgium.....	46,179:2/	74,682	11,918	22,433	24,350	15,981	—	—	
Denmark.....	400,660:2/	370,593	81,129	112,655	101,191:3/	75,618	70,988	88	
France 4/.....5/	529,000:5/	584,000	—	—	—	—	—	—	
Germany, Western.....6/7/	560,000:2/	607,980:3/	116,204	171,611	179,783:3/	140,382	125,933	108	
Ireland.....	89,400:2/	72,838	3,326	22,444	32,425:3/	14,643	3,738	112	
Netherlands.....	201,000:2/	184,274	32,041:3/	61,978	56,167:3/	34,088:5/	25,312	79	
Norway.....	24,930	24,647	4,630	9,279:3/	7,683	3,055:5/	4,186	90	
Sweden.....	152,769:3/	234,322	49,901	67,965:3/	69,617:3/	46,839:5/	45,110	90	
Switzerland 8/.....	57,760	55,115	9,034	12,308	17,295	16,478:5/	6,342	70	
United Kingdom.....	44,200:3/	12,634	3,181:3/	5,197	3,136:3/	1,120:5/	1,671	52	
Argentina.....	65,742	82,452	26,235	24,251	8,818	23,148	20,944	80	
Union of South Africa.....9/	27,725	65,867	21,974	14,688	11,978	17,227	—	—	
Australia.....7/	415,250:3/	314,381:3/	99,966:3/	47,464	62,032	104,919	72,089	72	
New Zealand.....7/	366,912:2/	410,312:2/	124,768	38,248	73,472	173,824	137,536	110	
Export gradings.....10/	322,796:3/	357,765	119,439	30,618	54,089:3/	153,619	120,302	101	
Cheese									
Canada.....1/	119,924	85,260	5,010	27,197	38,424	14,629	3,880	77	
United States.....	643,234	1,157,560	235,250	379,510	330,125	212,675	225,035	96	
Denmark.....	68,820:2/	165,124	34,833:2/	52,470	46,516:3/	31,305	33,730	97	
France 11/.....5/	584,000:5/	617,000	—	—	—	—	—	—	
Italy 11/.....	523,518:2/	613,000	—	—	—	—	—	—	
Netherlands.....5/	200,000:3/	265,257	37,839	87,494	86,390:3/	53,534:5/	38,596	102	
Norway 12/.....	39,067	63,929	13,354	21,895:3/	18,361	10,319:2/	11,978	90	
Sweden.....	76,059	120,007	29,441	35,902:3/	33,227:3/	21,437:5/	25,349	86	
Switzerland 12/.....	111,729:2/	116,848:3/	12,930	31,089	39,220	33,609:5/	16,428	127	
United Kingdom 4/.....	109,000:3/	98,516	24,282	34,496	30,240:3/	9,498:5/	24,525	101	
Argentina.....	67,873	209,437	59,083	52,911	15,873	81,570	66,138	112	
Union of South Africa.....9/	10,195	21,088	6,885	4,339	4,171	5,693	—	—	
Australia.....7/	48,400:2/	93,240:3/	22,157:3/	9,909	22,010	39,164	18,554	84	
New Zealand.....7/	210,911:3/	226,612:3/	75,488	26,356	32,704	92,064	71,456	95	
Export gradings.....10/	204,110:2/	224,411	81,570	38,221	17,881:3/	86,739	72,809	89	

Canned milk									
Canada 13/	:	:	:	:	:	:	:	:	:
United States 13/	:	:	:	:	:	:	:	:	:
Cuba	104,335	327,844	44,029	120,531	110,213	53,071	48,399	110	
Denmark	2,469,535	3,966,350	849,685	1,396,225	1,084,025	636,415	746,375	88	
France	32,564	45,192	5,544	8,820	18,102	12,726	—	—	
Netherlands	40,785	—	—	—	—	—	—	—	
Switzerland	28,953	—	—	—	—	—	—	—	
United Kingdom	309,952	394,822	87,726	116,341	98,180	92,575	98,253	112	
Australia	14,198	—	—	—	—	—	—	—	
New Zealand	378,560	176,512	30,823	97,395	33,062	15,232	26,092	85	
	41,894	149,601	38,276	20,418	30,989	59,918	31,212	82	
	11,273	—	—	—	—	—	—	—	
Dried milk 16/									
Canada	:	:	:	:	:	:	:	:	:
United States	26,079	69,409	7,710	22,664	25,146	13,889	9,006	117	
Belgium	203,555	826,605	178,125	314,180	220,950	113,350	186,720	105	
Denmark	5,500	17,147	936	7,272	7,018	1,921	—	—	
France	2,205	—	—	—	—	—	—	—	
Netherlands	7,685	—	—	—	—	—	—	—	
Sweden	56,438	75,432	7,379	30,806	27,039	10,208	11,642	158	
Switzerland	1,351	17,756	5,691	5,178	4,279	2,608	—	—	
United Kingdom	7,187	—	—	—	—	—	—	—	
Australia	43,098	50,086	7,437	27,238	11,917	3,494	9,527	128	
New Zealand	16,971	57,013	13,156	4,538	12,704	26,615	13,901	106	
	17,429	—	—	—	—	—	—	—	

1/ Average 1935-39. 2/ Total production in 1951 is estimated at 169,476,000 pounds. 3/ Revised. 4/ Total production. 5/ Estimated. 6/ Average 1935-38. 7/ Production year ending June 30. 8/ Total butter, and includes butter made from the milk of sheep and goats. 9/ Production year ending August 31. 10/ Marketing year ending July 31. 11/ Total cheese, and includes cheese made from the milk of sheep and goats. 12/ Total cheese and includes cheese made from the milk of goats. 13/ Both bulk and case goods. 14/ Less than a 5-year average. 15/ For 1937. 16/ Total dried-whole and dried-skim milk for human consumption. 17/ For 1938.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U. S. Foreign Service reports, and other information.—June 30, 1952.



FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD-6-52

June 9, 1952

WORLD BUTTER AND CHEESE PRODUCTION, 1951

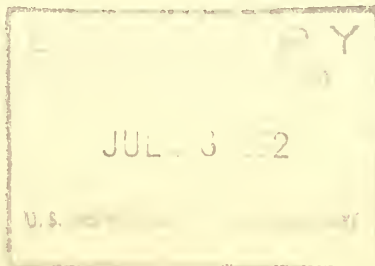
Cheese Production Shows Slight Further Increase; Butter Production Declines

Cheese production, combined farm and factory, in the 22 major producing countries for which comparable data are available showed a slight increase in 1951 over 1950, but was about 30 percent greater than the prewar average. The increase over 1950 reflected the change in the general volume of milk production, which was slightly more than maintained. Farm and factory butter production in 1951, on the other hand, declined from a year earlier, and, being considerably less than it was prior to World War II, raises a question as to the likelihood of a recovery to prewar levels. Butter production in the 21 countries for which comparable estimates are available declined nearly 3 percent from 1950 and was nearly 14 percent less than in the prewar period. There has been only a gradual shift since prewar from farm to factory production of these products in reporting countries.

Cheese

Maintained or increased cheese production in 1951 as compared with 1950 was reported in 13 countries. This was generally the result of an increase in the demand for this product, reflecting in part the shortage and high price of meats and an anticipated increase in export demand. In some countries it reflected a relatively low ceiling price for fluid milk or a condition of milk surplus. The decline in cheese production in the other 9 reported countries was generally moderate and reflected a decline in milk production in most of them. The widespread production of this product on farms and in small, non-reporting plants, as practiced in a great many countries, makes any attempt at a world-wide estimate of cheese production appear inadvisable.

The estimates of cheese production shown in the table include that made from sheep and goats' milk as well as from cows' milk, from skim milk as well as from whole milk, and in most cases include estimates of production on farms.



Production of cheese in the United States and in Canada in 1951, nearly all of which is made in factories, declined 3 and 12 percent, respectively, from a year earlier. Compared with prewar, production in the United States was 80 percent greater, while production in Canada was about 28 percent smaller.

An increase in cheese production was fairly general throughout Europe in 1951, with increases of 9 percent or more over 1950 reported in Denmark, Netherlands, Belgium, Greece, Western Germany, and Norway. The greatest decline among reporting countries of Europe occurred in the United Kingdom (-20%) and Ireland (-29%), while declines of 6 percent or less were reported for Switzerland, and Austria. Increases over the prewar average were also fairly general, and, of the countries reported, only Austria, Belgium and Greece have not yet fully recovered their prewar volume. Large increases in cheese production over prewar in Denmark, the Netherlands and Norway reflect a major shift in milk utilization from butter to cheese in those countries.

Among Southern Hemisphere countries in 1951 declines from 1950 occurred in Australia and Argentina. Preliminary data, indicating a decline in New Zealand, may be revised upward later. Increases were reported in the Union of South Africa and Uruguay. Compared with prewar, however, all reporting countries south of the equator showed significant increases.

Butter

The decline in butter production, which was particularly noticeable in such important milk producing countries as the United States, Canada, Denmark, the Netherlands, Sweden, Argentina and Australia, was due to several factors. They include the increased demand for fluid milk and other whole milk products, the increased use of butter substitutes, uncertainties relative to export markets and prices, controls affecting milk utilization and prices of this product in some countries. With the exception of New Zealand, the sharpest increases occurred in countries which are usually on a net import basis. Total world butter production, including ghee, is estimated at 8,200 million pounds, a decline of about 1 percent from the revised estimate of 8,300 million pounds in 1950. This represents a decline of about 15 percent from the estimated prewar total of 9,600 million pounds.

The 1951 estimate of world production of butter in addition to the estimates for the 22 reported countries, includes estimates of production based largely on indicated changes in other countries or groups of countries for which information is incomplete and should be regarded as a rough approximation only. World total estimates include allowances for the production of such butter-type products as ghee (made from buffalo cows' milk in India, Turkey, Egypt and other Middle and Far Eastern countries) and samneh ("clarified butter," made largely from sheep's milk in Syria and possibly other Middle Eastern countries) as it seemed impracticable to make separate estimates for these products. The annual production of ghee is estimated at from 1 to 2 billion pounds.

In North America, the decline in United States and Canadian butter production of over 11 and 1 percent, respectively, accounts for most of the decline from 1950 on this continent. Mainly because the United States production in 1951 was only two thirds of the prewar average, butter output in North America in 1951 was approximately 70 percent of prewar.

In South America, an estimated decline of over 11 percent from 1950 was attributed mainly to the fact that sharp declines in the Argentine, in Brazil, both the result of serious drought, and in Venezuela, were less than offset by increases in Peru, Colombia and Ecuador. Largely as a result of the steady growth in South American dairying, 1951 butter production was somewhat greater than in prewar years, however.

In Europe, 1951 butter production is believed to be slightly greater than that of a year earlier. Declines which occurred in such traditional exporting countries as Denmark (-6 %) the Netherlands (-11 %) and Sweden (-2 %) and in the occasional exporting countries of Ireland and Norway were more than offset by increases in a number of butter-importing countries, including all Germany, France, Belgium, Finland, Spain and Greece. In Europe total butter production in 1951 is believed to be somewhat less than just prior to World War II although the decline has not been as great as that in North America.

In Africa, the only country for which comparable data are available is the Union of South Africa, where total production increased 8 percent from 1950. Since production in other South African dairy areas including such countries as Egypt, Morocco and Ethiopia probably did not change significantly, 1951 butter production on this continent may have increased about 5 percent from 1950. Butter production in Africa is believed to be considerably greater than before the war.

While estimates of butter production in Asia, like those for Africa, are subject to considerable error, useful information is available for India, Turkey, Syria and a few other countries. A significant increase over 1950 in the production of milk and butter (including ghee) was reported for India, the largest single producing country on this continent. An appreciable increase also occurred in Turkey, which country probably ranks next to Asiatic Russia in importance in Asia's dairy production. While sharp declines occurred in Syria, Israel and other nearby areas as a result of drought in 1951, production in these areas is not sufficiently great to offset the increases in India and Turkey. Accordingly, a slight increase in 1951 over 1950 probably occurred.

Outlook

Total milk production in the principal reporting countries in 1952 is expected to be fairly well maintained or to decrease only slightly. Increases over 1951 are expected in New Zealand, Western Germany, and France. Slight increases are expected in Canada, Austria and the United Kingdom and some recovery in milk production is expected in Australia, Argentina and Brazil, if

weather conditions return to normal. In general the rate of expansion is being checked however, by increasing fertilizer, feed, labor, and marketing costs, opportunities for relatively greater returns from other agricultural and non-agricultural enterprises and the necessity of diverting milk to lower price-class uses as fluid milk markets become satisfied. Production is expected to be no greater in 1952 and possibly less in the United States, Denmark, the Netherlands, Sweden, Switzerland and in the Union of South Africa. The gradually increasing use of milk for direct consumption, however, is apt to result in slightly smaller supplies for industrial use. While some decline in cheese production is expected in Canada, Austria and the United Kingdom, most of any decline in industrial milk utilization is expected to affect butter and little or no decline in the output of cheese is anticipated for 1952.

Countries expecting maintained or increased cheese production are Denmark, France, Western Germany, Norway and Finland. Recovery sometime in 1952 is expected in Australia, Argentina and Brazil.

A slight further decline in butter production, among major reporting countries, is anticipated for 1952. Probable further declines in the United States, Denmark, the Netherlands, Sweden, Norway and the United Kingdom may more than offset expected increases in Canada, New Zealand, Austria, France, Western Germany and the possible recovery in Australia, the Argentine and Brazil.

This is one of a series of regularly scheduled reports on world agricultural production approved by the Office of Foreign Agricultural Relations Committee on Foreign Crop and Livestock Statistics. It is based in part upon U. S. Foreign Service reports.

**BUTTER: Preliminary estimate of production in specified countries in 1951,
with comparisons**

Continent and country	Average 1934-38			1950			1951		
	Factory	Total	Million pounds	Factory	Total	Million pounds	Factory	Total	Million pounds
NORTH AMERICA									
Canada.....	1/	255	1/	261	308	258			304
United States.....	1,673	2,178		1,386	1,648	1,215			1,464
Cuba.....	1/	4	2/	3	3	3	2/	2/	3
EUROPE									
Austria.....		2/3	51		54			2/	52
Belgium.....	4/	46	156	71	167	75	2/	2/	170
Denmark.....		401	401	396	396	371			371
Finland.....	5/	69	121	76	109	92	2/	2/	128
France.....	2/	220	529		529		2/	2/	584
Germany, Western.....	5/7/	560	681	571	595	608			657
Greece 8/.....			13		12				14
Ireland.....	6/	89	149		124	73	2/	2/	115
Italy.....			111	83	128		2/	2/	135
Netherlands.....	10/	230	239	206	206	184			184
Norway.....		24	51	26	40	25	2/	2/	39
Sweden.....		153	190	240	245	234			239
Switzerland 11/.....			58		42				55
United Kingdom.....	10/	54	101	37	55	13	2/	2/	31
SOUTH AMERICA									
Argentina.....			66		100				82
Brazil.....	4/	51	72						
AFRICA									
Union of South Africa.....	12/	28	41	60	72	66	2/	2/	78
OCEANIA									
Australia.....	7/	415	437	379	390	314	2/	2/	325
New Zealand.....	7/	367	379	372	385	410	2/	2/	423
Estimated world total 13/.....		9,600			8,300				8,200

1/ Average 1935-39. 2/ Estimated. 3/ Average 1934-37. 4/ Average 1936-39. 5/ Average 1936-39.
6/ Average 1935-38. 7/ Years ending June 30. 8/ Made from the milk of cattle, buffaloes, sheep and
goats. 9/ Average 1933-37. 10/ For 1939. 11/ Made from the milk of cattle and goats. 12/ Years
ending August 31. 13/ Includes product weight of ghee in those countries where ghee production is
common, especially India, Turkey, Egypt and other Middle and Far Eastern countries.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, United States
Foreign Service reports, and other information.-June 9, 1952.

CHEESE: Preliminary estimate of production in specified countries in 1951,
with comparisons

Continent and country	Average 1934-38		1950		1951	
	Factory	Total	Factory	Total	Factory	Total
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
NORTH AMERICA						
Canada.....	1/	121	98	99	86	87
United States.....	643	643	1,193	1,193	1,158	1,158
Cuba.....	2/	6	5	10	5	10
EUROPE						
Austria.....	-	69	-	29	-	28
Belgium.....	-	18	10	13	12	16
Denmark.....	69	69	130	130	165	165
Finland.....	5/	25	32	32	34	34
France 7/.....	23	584	-	584	-	617
Germany, Western 8/.....	9/10/	276	300	300	335	335
Greece 11/.....	-	129	-	95	-	110
Ireland.....	-	4	-	7	-	5
Italy 7/.....	-	524	-	613	-	613
Netherlands.....	3/	267	237	285	267	311
Norway 14/.....	40	50	-	58	-	64
Sweden 8/.....	76	88	114	114	120	120
Switzerland 14/.....	-	112	-	124	-	117
United Kingdom.....	15/	101	118	124	93	99
SOUTH AMERICA						
Argentina.....	-	68	-	215	-	209
Brazil.....	60	93	-	-	-	-
Uruguay.....	-	11	-	13	-	16
AFRICA						
Union of South Africa.....	16/	11	-	20	-	21
OCEANIA						
Australia.....	10/	49	104	105	93	94
New Zealand.....	10/	211	238	238	226	226

1/ Average 1935-39. 2/ For 1937. 3/ Estimated. 4/ Average 1934-37. 5/ Average 1936-39. 6/ No estimate available on farm production. 7/ Made from the milk of cattle, sheep and goats. 8/ Apparently includes some low-fat cheese. 9/ Average 1935-38. 10/ Years ending June 30. 11/ Made from the milk of cattle, buffaloes, sheep and goats. 12/ Average 1933-37. 13/ Average 1936-38. 14/ Made from the milk of cattle and goats. 15/ For 1939. 16/ Years ending August 31.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, United States Foreign Service reports, and other information.-June 9, 1952.



FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD 5-52

May 26, 1952

MILK PRODUCTION AND UTILIZATION IN PRINCIPAL PRODUCING COUNTRIES IN 1951 ^{1/}

Total 1951 milk production in the 14 major milk producing countries for which comparable utilization data are available was less than 1 percent greater than a year earlier, although it was nearly 8 percent greater than the prewar average. The increase over prewar was accomplished with about 5 percent fewer cows.

For the first time since World War II a decline in milk production was fairly general among the major dairy product exporting countries, with the exception of New Zealand. Faced with growing feed, labor and marketing costs relative to milk and dairy product returns, with relatively higher net returns from beef, pork and other agricultural and non-agricultural enterprises, the increasing rate of milk production was generally checked or reversed. Foot-and-mouth disease was an important deterrent in several countries of Western Europe, and tended to intensify the decline in milk production late in 1951, especially in Denmark and the Netherlands. Swedish production also declined. 1951 production in Canada and in the United States was only slightly less than in 1950 but 7 and 11 percent more, respectively, than prewar.

Milk production increases in European countries were found principally among those usually on a net import basis for dairy products, where subsidies, protected markets, and other incentives tended to encourage domestic production, especially for fluid use. Even here opportunities for relatively greater returns from other livestock enterprises, increased costs relative to dairy returns and the necessity of diverting milk to lower price-class uses is already tending to check further expansion. In most of these countries, uncertainties of the export markets and competition with low cost, surplus producing countries have tended to discourage production beyond local needs. Significant increases in 1951 occurred in Western Germany, France and Switzerland and slight increases in Belgium, Austria and Norway. Production in the United Kingdom was 4 percent less than in 1950 but considerably greater than prewar.

In Southern Hemisphere countries, severe drought in 1951 was probably the greatest single cause of a general production decline from a year earlier. Most seriously affected were Australia, where hot, dry weather in eastern coastal States destroyed pastures, and grass fires reduced the numbers of dairy stock; Argentina, where important dairy areas were seriously affected during

^{1/} This statement relates almost exclusively to cows' milk.

most of the spring and summer growing season; and Brazil, where drought sharply reduced milk production in important central and southern States. The most notable exception was New Zealand, where moisture and growing conditions were so good that much of the grass grew rank and intermittent rains made necessary a larger than usual conversion to silage. Here, 1951 production was about 6 percent greater than a year earlier and a further increase is expected in 1952.

The general trend towards relatively greater utilization for fluid milk and cream was continued in most countries. Expanding urban populations, characterized by large numbers of children, fairly well maintained incomes, a recognized general improvement in fluid milk quality, together with Government supply and price controls or production incentives have combined to serve as a further inducement to this trend. It has been augmented by an increase in the delivery of milk to plants and the expansion of commercial dairy herds in or near urban milksheds. Over 41 percent of all milk produced was used for domestic milk and cream compared with about 40 percent in 1950 and less than 34 percent during the prewar period. The increase in fluid consumption has been somewhat greater than the total increase in milk production.

The decline from 1950 in the quantity of milk used in the manufacture of butter in 1951 just about equalled the increased use in fluid milk and cream. This reflects the generally greater returns and expanding markets, both domestic and export, for whole milk products. Declines were noticeable in such important exporting countries as Australia, Denmark and the Netherlands, while slight to moderate declines occurred in Norway, Sweden and Canada. The United States and the United Kingdom also recorded sharp declines. With the exception of New Zealand, where utilization increased about 8 percent, the sharpest increases occurred in butter-importing countries. About 35 percent of all milk produced in 1951 was used in the production of butter, compared with over 36 percent in 1950 and nearly 46 percent in the prewar period.

The quantity of milk used in the production of cheese increased at about the same relative rate as the increase in milk production and the percent of milk used in the production of the product in 1951, slightly over 10 percent, was about the same as that of a year earlier. About 8 percent of the milk was used for cheese in the period just prior to the war.

There appears little relationship, among countries, between the change in the quantity of milk used for cheese and exports of this product. Denmark, an important exporter, records the greatest increase over 1950 and prewar, while Belgium, an important importing market, shows the second greatest percentage increase over 1950 in the amount of milk so used. Increases in those 2 countries and in Western Germany, the Netherlands, Norway, France and New Zealand slightly more than offset declines in Switzerland, an important exporter, Sweden, Canada, the United States, Australia and others of the 14 countries included in this comparison.

The quantity of milk used in canned and dried milks and other uses in 1951 accounted for about 6.4 percent of the total milk produced, and represented an increase of about 6 percent over the quantity used in 1950. Compared with prewar estimates, however, the development of condensery-drying operations has been significant, representing an increase of 55 to 60 percent. The greatest quantitative increases, in the countries compared, occurred in the United States, Canada, Western Germany, Denmark, the Netherlands, Australia and France.

While an accurate separation of these data is not possible, it appears that the increase in milk used for condensed and evaporated milk, compared with prewar, has been great, while the increase over 1950 has been relatively small. The data for "other uses" which include a large percentage for dry whole milk and milk-base dietetics suggest a steady increase in the production of these products in most countries equipped with drying facilities. This is reflected in the growing world trade in these products.

The quantity of milk fed to calves, like the quantity of milk and dairy products consumed on farms, has remained fairly steady, but the percentage of production represented has declined from nearly 8 percent before the war to about 7 percent in recent years. The rate of milk feeding per calf has shown a moderate tendency to increase.

This is one of a series of regularly scheduled reports on world agricultural production approved by the Office of Foreign Agricultural Relations Committee on Foreign Crop and Livestock Statistics. It is based in part upon U. S. Foreign Service reports.

MILK: Production and utilization in specified countries, 1951 (preliminary) and 1950

Country	Production			Utilization 1/						
	Milk cows 2/	Production per cow	Milk production	Fluid milk 3/	Butter	Cheese	Canned milk	Other uses 4/	Feed	
	1,000 head	Pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	
1951										
Canada.....	3,542	4,628	16,392	5,867	7,123	1,000	688	650	1,064	
United States.....	21,705	5,326	5/ 116,591	60,000	29,270	11,540	7,010	5,319	3,452	
Austria.....	1,186	3,755	4,453	2,120	1,295	276	-	6/	757	
Belgium.....	950	7,713	7,327	1,671	4,579	166	16	9	886	
Denmark.....	1,583	7,291	11,541	1,689	7,875	1,142	-	6/	485	
France.....	8,630	4,212	36,350	9,200	13,680	5,400	300	270	7,500	
Germany, Western.....	5,741	5,827	33,444	11,376	15,674	1,742	544	647	3,461	
Netherlands.....	1,533	8,151	12,499	8/ 3,681	4,071	2,800	809	455	683	
Norway.....	755	4,710	3,556	1,750	900	560	-	6/	260	
Sweden.....	1,650	6,379	10,525	3,649	5,313	888	-	6/	551	
Switzerland 10/.....	885	6,570	5,917	2,380	1,163	1,309	-	6/	948	
United Kingdom.....	3,650	6,048	22,074	17,747	762	1,061	495	505	1,504	
Australia.....	2,253	5,041	11/ 11,357	2,621	6,988	923	323	502	-	
New Zealand 12/.....	1,850	5,957	11,025	971	7,428	2,183	-	6/	173	
1950										
Canada.....	3,609	4,558	16,449	5,852	7,225	1,135	597	587	1,053	
United States.....	21,944	5,314	13/ 117,602	58,174	32,960	11,866	6,941	4,375	3,286	
Austria.....	1,185	3,674	4,354	2,055	1,315	287	-	6/	694	
Belgium.....	950	7,497	7,123	1,599	4,479	143	20	7	875	
Denmark.....	1,577	7,566	11,931	1,585	8,576	912	-	6/	516	
France.....	8,400	4,057	34,080	8,800	12,325	5,000	210	245	7,500	
Germany, Western.....	5,602	5,454	30,556	10,626	14,088	1,521	401	613	3,307	
Netherlands.....	1,518	8,381	12,723	8/ 3,584	4,768	2,529	770	444	628	
Norway.....	766	4,603	3,526	1,750	940	515	-	6/	241	
Sweden.....	1,681	6,415	10,789	3,765	5,333	1,012	-	6/	544	
Switzerland 10/.....	858	6,482	5,673	2,392	898	1,390	-	6/	860	
United Kingdom.....	3,767	6,122	23,062	17,572	1,349	1,308	752	526	1,555	
Australia.....	2,354	5,458	11/ 12,848	2,593	8,345	1,031	327	552	-	
New Zealand 12/.....	1,846	5,641	10,416	948	6,905	2,117	-	6/	173	

1/ Includes farm uses. 2/ Includes, for the United States and Canada, cows kept mainly for milk, and for all other countries, cows producing over and above the requirements of the calf. 3/ Includes milk used for cream. 4/ Includes milk used for ice-cream, dried whole milk, minor products, waste and balance. 5/ Total production is shown. Production on farms, - 115,591 million pounds. 6/ Includes canned milk. 7/ Includes both hand-fed milk and milk sucked by calves. 8/ Excludes cream separated for butter. 9/ Includes cream separated in standardizing fluid milk. 10/ Production and utilization include goats' milk. 11/ Excludes milk fed to calves. 12/ Year ending June 30. 13/ Total production is shown. Production on farms, - 116,602 million pounds.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U.S. Foreign Service reports, and other information.

MILK: Production and utilization in specified countries, 1934-38

Country	Production			Utilization ^{1/}					
	Milk cows ^{2/}	Production per cow	Milk production	Butter	Cheese	Canned milk	Other uses ^{4/}	Feed	
	1,000 head	Pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	
Canada ^{5/}	3,780	4,043	15,284	8,144	1,347	218	181	792	
United States	23,933	4,291	105,416	43,729	6,449	4,607	4,333	2,725	
Austria ^{7/}	1,210	4,630	5,602	1,212	661	-	-	661	
Belgium	967	7,022	6,790	4,321	163	15	42	816	
Denmark ^{8/9/}	1,692	6,905	11,684	9,314	331	-	10/	551	
Finland	1,309	4,268	5,587	2,735	205	-	-	91	
France	8,400	3,929	33,000	12,325	5,000	-	10/	7,500	
Germany, Western ^{2/12/}	6,049	5,467	33,069	17,306	1,279	-	10/	3,858	
Italy	3,466	3,968	13,750	2,700	3,600	24	626	3,100	
Netherlands	1,460	7,658	11,180	5,536	2,291	-	10/	512	
Norway ^{8/9/}	802	3,683	2,954	1,111	489	-	10/	177	
Sweden ^{8/9/}	1,947	5,258	10,238	5,170	782	-	10/	959	
Switzerland ^{8/14/}	902	6,297	6,041	1,497	1,303	-	10/	1,067	
United Kingdom	3,300	5,583	18,424	2,800	1,008	647	686	2,183	
Australia ^{9/}	2,545	4,629	15,780	9,466	444	-	10/	-	
New Zealand ^{9/}	1,787	5,694	10,176	7,255	1,969	-	10/	160	

^{1/} Includes farm uses. ^{2/} Includes, for the United States and Canada, cows kept mainly for milk, and for all other countries, cows producing over and above the requirements of the calf. ^{3/} Includes milk used for cream. ^{4/} Includes milk used for ice-cream, dried whole milk, minor products, waste and balance. ^{5/} Average 1935-39. ^{6/} Total production is shown. Milk production on farms, - 102,590 million pounds. ^{7/} For 1934. ^{8/} Average 1933-37. ^{9/} Years ending June 30. ^{10/} Includes canned milk. ^{11/} Includes both hand-fed milk and milk sucked by calves. ^{12/} Average 1935-38. ^{13/} For 1938. ^{14/} Production and utilization include goats' milk. ^{15/} Excludes milk fed to calves.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U.S. Foreign Service Reports, and other information.-May 26, 1952.

7-1743
F117

serve



FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

CURRENT

★ JUN 18 1952

U. S. DEPARTMENT OF AGRICULTURE

IS 4-52

May 5, 1952

WORLD CONSUMPTION TRENDS IN MILK AND DAIRY PRODUCTS

Consumption of fluid milk and dairy products (whole milk equivalent basis) per person in principal countries showed some gain in 1950 over 1949 but the quantity is still 5 percent below the prewar level. Notwithstanding an increase of almost 8 percent in total milk production in these same countries, the increase in population has lowered the per capita intake.

The lower per capita consumption on a fat basis represents a decline of nearly one-fourth in butter consumption whereas fluid milk and cheese consumption has risen resulting in actually an increase in consumption of milk solids-not-fat. Thus, despite the lower rate of total milk and dairy products consumption as expressed in whole milk equivalent, consumers in most of these countries obtained greater nutritive value from dairy products in postwar than in prewar years. These countries are expected to continue the trend toward utilizing more of their milk supplies in whole milk products and less as butter according to the Office of Foreign Agricultural Relations.

Aside from the general increase in milk production in this group of 18 countries the most consistent shift in patterns has been toward the production and/or consumption of more cheese. Only in Austria and Greece was less cheese produced or consumed and here basic disruptions altered the pattern. While the per capita consumption of butter is now significantly lower than prewar in a number of important consuming countries, notably the United States, Canada, Denmark, Germany, the Netherlands and the United Kingdom, that pattern is broken by the reverse situation in Belgium, Ireland, Sweden and New Zealand.

Prepared by Louis M. Smith, based in part on United States Foreign Service Reports.

Milk and Dairy Products: Total milk production and whole milk equivalent of fluid milk and dairy products consumed, total and per capita, principal countries, prewar average, 1949 and 1950 preliminary

Countries	Total milk production				Whole milk equivalent of fluid milk and dairy products consumed				Per capita	
	: Prewar 1/		: 1949		: Prewar 1/		: 1949		: 1949	
	: Million	: Million	: Million	: Million	: Million	: Million	: Million	: Million	: Pounds	: Pounds
	: pounds	: pounds	: pounds	: pounds	: pounds	: pounds	: pounds	: pounds	: Pounds	: Pounds
Canada	: 15,789	: 16,843	: 16,437	: 13,537	: 14,634	: 15,076	: 1,090	: 1,095	: 1,100	
United States	: 105,416	: 122,071	: 123,381	: 102,940	: 113,076	: 117,206	: 799	: 761	: 776	
Austria	: 5,602	: 4,079	: 4,354	: 4,901	: 3,454	: 3,644	: 721	: 487	: 514	
Belgium	: 6,790	: 6,816	: 6,944	: 6,411	: 8,010	: 8,069	: 763	: 911	: 908	
Czechoslovakia	: 9,828	: 5,768	: 6,500	: 8,957	: 2/	: 2/	: 627	: 2/	: 2/	
Denmark	: 11,684	: 10,789	: 11,931	: 3,049	: 2,426	: 3/ 2,328	: 823	: 577:3/	: 588	
Finland	: 5,587	: 4,630	: 5,291	: 4,883	: 4,214	: 4,604	: 1,357	: 1,054	: 1,124	
France	: 33,047	: 30,671	: 34,079	: 25,807	: 4/ 25,343	: 27,097	: 628	: 4/ 603	: 642	
Germany, Western	: 33,071	: 23,225	: 5/ 28,880	: 30,296	: 5/ 24,331	: 5/ 31,524	: 788	: 5/ 496:5/	: 630	
Greece 6/	: 1,462	: 1,127	: 1,282	: 1,496	: 1,249	: 1,423	: 219	: 160	: 180	
Ireland	: 5,090	: 5,068	: 5,296	: 3,339	: 4,089	: 4,167	: 1,151	: 1,358	: 1,388	
Italy 7/	: 13,750	: 14,330	: 14,509	: 9,717	: 11,593	: 11,884	: 223	: 253	: 257	
Netherlands	: 11,180	: 11,803	: 12,617	: 6,801	: 6,696	: 6,577	: 800	: 671	: 651	
Norway	: 2,954	: 3,417	: 3,582	: 2,682	: 3,037	: 3,001	: 925	: 963	: 988	
Sweden	: 10,238	: 10,245	: 10,825	: 7,898	: 9,440	: 9,506	: 1,261	: 1,336	: 1,356	
Switzerland	: 5,852	: 5,142	: 5,534	: 4,116	: 7/ 4,535	: 3/ 4,598	: 987	: 3/ 980:3/	: 987	
United Kingdom	: 18,424	: 21,552	: 23,160	: 45,859	: 40,192	: 44,317	: 951	: 798	: 875	
Australia 5/	: 11,780	: 12,968	: 12,966	: 6,721	: 8,537	: 7,998	: 974	: 1,081	: 975	
New Zealand 5/	: 10,176	: 10,135	: 10,416	: 2,035	: 3/ 2,361	: 3/ 2,580	: 1,277	: 3/ 1,253:3/	: 1,358	

1/ Prewar averages are for years 1933/34-1937/38 for Czechoslovakia, Greece and Norway, 1934-37 for Austria, 1935-38 for Western Germany, 1935-39 for Canada, and 1934-38 for others. 2/ Not available. 3/ Does not include canned and dried milk. 4/ Does not include dried milk. 5/ Year ending June 30. 6/ Includes the milk of cows, buffalos, sheep and goats. 7/ Includes the milk of cows, sheep and goats.

Milk and Dairy Products Consumption: Whole milk equivalent of total fluid milk and dairy products consumed, product weights of fluid milk, butter, and cheese consumed, per capita, selected countries, prewar average 1/ 1949 and 1950 preliminary

Countries	Whole milk equivalent of			Fluid milk			Butter,			Cheese,		
	fluid milk and dairy products consumed			product weight			product weight			product weight		
	Prewar	1949	1950	Prewar	1949	1950	Prewar	1949	1950	Prewar	1949	1950
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Canada	1,090	1,095	1,100	430	426	425	31.0	23.5	23.5	3.8	4.6	4.6
United States	799	761	776	338	384	385	16.9	10.4	10.7	5.3	7.2	7.7
Austria	721	487	514	2/ 466	262	289	6.5	7.8	7.3	9.3	3.1	4.1
Belgium	763	911	908	171	237	219	20.4	22.1	23.5	8.1	8.5	9.0
Czechoslovakia	627	3/	3/	270	3/	3/	12.8	3/	3/	7.4	3/	3/
Denmark	823	577	4/ 588	369	369	361	19.4	9.3	10.5	13.8	14.8	10.0
Finland	1,357	1,054	1,124	710	568	604	26.9	20.0	22.0	3.1	3.2	2.7
France	628	5/ 603	642	193	200	198	12.8	12.2	13.0	14.3	12.7	14.5
Germany, Western 6/	788	496	7/ 630	266	7/ 149	7/ 210	17.6	7/ 10.8	7/ 13.7	7.7	7/ 7.7	7.8
Greece 8/	219	160	180	2/ 88	2/ 79	2/ 85	2.1	1.4	1.5	18.9	11.6	13.6
Ireland	1,151	1,358	1,388	324	350	366	33.4	40.0	40.3	0.7	1.3	2.0
Italy 9/	223	253	257	80	105	106	2.6	2.8	2.8	11.2	11.1	11.3
Netherlands	800	671	651	272	369	337	15.2	6.7	6.2	15.9	14.5	13.2
Norway	925	963	988	387	551	563	15.2	11.7	10.8	16.8	13.7	17.2
Sweden	1,261	1,336	1,356	521	518	511	22.1	31.3	31.1	14.8	17.6	17.4
Switzerland	987	4/ 980	4/ 987	542	524	511	14.0	12.3	13.3	17.9	20.3	20.4
United Kingdom	951	798	875	218	340	347	24.8	13.5	16.5	9.0	9.9	10.1
Australia 7/	974	1,081	975	234	327	320	31.4	28.9	24.8	3.9	6.7	6.6
New Zealand 7/	1,277	4/ 1,253	4/ 1,358	423	474	499	39.4	40.0	44.2	5.0	7.4	7.9

1/ Prewar averages are for year 1934-37 for Austria and Belgium, 1933/34-1937/38 for Czechoslovakia, Greece and Norway, 1935-38 for Western Germany, 1935-39 for Canada, and 1934-38 generally for others. 2/ Includes canned and dried milk in terms of fluid milk. 3/ Not available. 4/ Does not include canned and dried milk. 5/ Does not include dried milk. 6/ Excludes the Saar and Western Sectors of Berlin in prewar years and excludes the Saar but includes the Western Sectors of Berlin in 1949 and 1950. 7/ Year ending June 30. 8/ Includes the milk of cows, buffalos, sheep and goats. 9/ Includes the milk of cows, sheep, and goats.

FLUID MILK ^{1/}: Percentage of total milk production, apparent consumption and per capita consumption, principal countries, prewar average, 1949 and 1950.

Countries	Percentage of total milk production			Apparent consumption			Per capita consumption		
	1949			1950 2/			1949		
	Prewar	Percent	Million pounds	Prewar	Percent	Million pounds	Prewar	Percent	Million pounds
Canada	2/4/	31	33	35	2/4/	4,730	5,621	3/4/	430
United States	41	47	43,559	47	47	57,085	58,100	338	426
Austria	5/	57	46	47	6/7/	3,171	1,859	6/7/	384
Belgium	21	31	28	28	1,434	2,109	2,054	171	262
Czechoslovakia	8/	39	2/	9/	3,857	9/	1,951	237	219
Denmark	11/	12	14	13	1,367	1,548	270	9/	9/
Finland	46	49	47	47	2,556	2,271	369	369	361
France	24	27	25	25	7,966	8,399	710	568	604
Germany, Western	13/	31	32	36	10,307	7,326	8,395	193	198
Greece 16/	10/	41	55	52	601	617	10,514	266	149
Ireland	18	21	21	21	940	1,051	671	88	79
Italy 17/	26	34	34	27	3,557	4,812	1,098	324	350
Netherlands	21	31	27	27	2,315	3,688	4,905	80	106
Norway 19/	38	48	46	46	1,122	1,645	3,406	272	369
Sweden	32	36	35	35	3,283	3,715	1,656	387	551
Switzerland 19/	39	47	43	43	2,262	2,425	3,763	521	518
United Kingdom	60	79	76	76	11,100	17,129	2,381	542	511
Australia	15/	14	20	20	1,612	2,581	17,582	218	340
New Zealand 3/15/	7	9	9	9	669	881	2,625	234	327
							948	423	474

^{1/} Includes milk used for cream. ^{2/} Preliminary. ^{3/} Includes milk used for ice-cream. ^{4/} Average 1935-39. ^{5/} For 1934.

^{6/} Average 1934-37. ^{7/} Includes canned and dried milk in terms of fluid milk. ^{8/} For 1937. ^{9/} Not available. ^{10/} Average 1933/34-1937/38. ^{11/} Average 1933-37. ^{12/} Estimated. ^{13/} Excludes the Saar and Western Sectors of Berlin. ^{14/} Excludes the Saar, but includes the Western Sectors of Berlin. ^{15/} Years ending June 30. ^{16/} Includes the milk of cows, buffalos, sheep and goats. ^{17/} Includes the milk of cows, sheep and goats. ^{18/} For 1938. ^{19/} Includes the milk of cows and goats.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, United States Foreign Service Reports, and other information. April 29, 1952.

BUTTER: Production, net trade, and consumption, principal countries, prewar average, 1949 and 1950, preliminary.

Countries	Production			Net trade			Apparent consumption			Per capita consumption		
	Prewar 1/			Imports: - Exports			Prewar 1/			Prewar 1/		
	Million pounds	Million pounds	1950 Million pounds	Million pounds	1949 Million pounds	1950 Million pounds	Million pounds	1949 Million pounds	1950 Million pounds	Pounds	1949 Pounds	1950 Pounds
Canada	349	335	311	-	5	-	2	2	326	31.0	23.5	23.5
United States	2,176	1,688	1,648	7	8	-	5	3	1,614	16.9	10.4	10.7
Cuba	4	3	3	-	1	6	2	4	5	0.8	0.8	1.0
Austria	51	55	51	-	7	5	1	55	52	6.5	7.8	7.3
Belgium	161	143	165	7	10	7	44	171	209	20.4	22.1	23.5
Czechoslovakia	182	6	6	7	1	6	6	183	6	12.8	6	6
Denmark	401	344	396	-	329	-	351	72	45	19.4	9.3	10.5
Finland	121	77	86	-	24	7	4	97	90	26.9	20.0	22.0
France	529	460	510	-	5	51	37	524	547	12.8	12.2	13.0
Germany, Western 7/	681	522	584	7	6	7	100	681	684	8	10.8	13.7
Greece	13	11	12	7	1	5	5	14	12	2.1	1.4	1.5
Ireland	149	121	128	-	52	-	7	97	121	33.4	40.0	40.3
Italy	111	117	124	7	1	12	9	112	133	2.6	2.8	2.8
Netherlands	239	185	205	-	110	-	142	129	63	15.2	6.7	6.2
Norway	44	40	44	-	-	-	10	44	34	15.2	11.7	10.8
Sweden	190	223	247	-	51	-	31	139	218	22.1	31.3	31.1
Switzerland	57	33	41	7	2	24	21	59	62	14.0	12.3	13.3
United Kingdom	101	46	58	7	1,074	635	779	1,175	837	24.8	13.5	16.5
Argentina	66	86	100	-	19	-	19	47	81	3.4	4.5	4.7
Union of South Africa	41	46	60	12/-	3	7	9	38	69	12/31.8	4.5	5.8
Australia	437	378	379	13/-	220	-	176	217	203	13/31.4	28.9	24.8
New Zealand	378	407	385	13/-	315	-	301	63	84	13/39.4	40.0	44.2

1/ Prewar averages are for years 1933/34-1937/38 for Czechoslovakia, Greece and Norway, 1934-37 for Austria, 1935-38 for Western Germany, 1935-39 for Canada and Cuba, and 1934-38 principally for others. 2/ Adjusted for stocks. 3/ Adjusted for stocks and shipments, and represents civilian consumption only. 4/ Estimated. 5/ Less than 500,000 pounds. 6/ Net available. 7/ In the prewar period, excludes the Saar and Western Sectors of Berlin, but in 1949 and 1950, excludes the Saar and includes Western Sectors of Berlin. 8/ Prewar trade data net available. Prewar consumption based on domestic production only. 9/ Made from the milk of cows, buffaloes, sheep and goats. 10/ Made from the milk of cows, sheep and goats. 11/ Made from the milk of cows, and goats. 12/ Years ending August 31. 13/ Years ending June 30.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, United States Foreign Service Reports, and other information. April 29, 1952.

CHEESE: Production, net trade and consumption, principal countries, prewar average, 1949 and 1950, preliminary

Countries	Production		Net Trade		Apparent consumption		Per capita consumption	
	: Mil. Lbs. : 1949	: Mil. Lbs. : 1950	: Imports : 1949	: Exports : 1949	: Mil. Lbs. : 1949	: Mil. Lbs. : 1950	: Pounds : 1949	: Pounds : 1950
Canada	121	122	- 79	- 51	42 : 2/	61 : 2/	3.8 :	4.6 :
United States	643	1,199	1,193	- 71	688 : 3/	1,075 : 3/	5.3 :	7.7 :
Cuba	6 : 4/	10 : 4/	5/	1 :	6 :	11 :	1.5 :	2.4 :
Austria	69 : 4/	19 : 4/	- 6	3 :	63 :	22 :	9.3 :	3.1 :
Belgium	17 : 4/	14 : 4/	51	62 :	68 :	76 :	8.1 :	9.0 :
Czechoslovakia	105	6/	-	6/	105 :	6/	7.4 :	6/
Denmark	69	136	- 18	- 74	- 87 :	62 :	43 :	10.0
Finland	23 : 4/	22 : 4/	- 12	- 9	- 17 :	13 :	11 :	2.7
France	4/7/ 584	7/ 595	6	- 16	590 :	535 :	615 :	14.5
Germany, Western	8/	329	9/	49 :	276 :	378 :	391 :	7.8
Greece	9/ 129	9/ 83	5/	7 :	129 :	90 :	107 :	13.6
Ireland	4	7	- 2	- 3	- 1 :	4 :	6 :	2.0
Italy	523 : 7/	522 : 7/	- 43	- 14	480 :	508 :	522 :	11.3
Netherlands	267	282	- 132	- 137	135 :	145 :	133 :	13.2
Norway	4/10/ 53	10/ 47	- 4	-	49 :	47 :	55 :	17.2
Sweden	88	146	115	2 :	89 :	123 : 2/	123 :	17.4
Switzerland	10/ 112	10/ 119	- 38	- 25	74 :	94 :	95 :	20.4
United Kingdom	11/ 109	11/ 74	316	421 :	425 :	495 :	509 :	10.1
Argentina	68 : 4/	218 : 4/	- 3	- 19	65 :	199 :	201 :	12.0
Union of So. Africa	11	17	12/ - 1	5/	5/ : 12/	10 :	21 : 12/	1.8
Australia	13/ 49	101	104 : 13/ - 22	- 48	- 50 : 13/	27 :	54 : 13/	6.6
New Zealand	13/ 211	234	239 : 13/ - 203	- 220	- 224 : 13/	8 :	15 : 13/	7.9

1/ Prewar averages are for years 1933/34-1937/38 for Czechoslovakia, Greece and Norway, 1934-37 for Austria and Belgium, 1935-38 for Western Germany, 1935-39 for Canada, 1936-38 for Ireland, 1936-39 for Finland, 1938 for Argentina, and 1934-38 principally for others. 2/ Adjusted for stocks. 3/ Adjusted for stocks and shipments, and represents civilian consumption only. 4/ Estimated. 5/ Less than 500,000 pounds. 6/ Not available. 7/ Made from the milk of cows, sheep and goats. 8/ Separate data on production and trade not available for prewar. 9/ Made from the milk of cows, buffaloes, sheep and goats. 10/ Made from the milk of cows and goats. 11/ Excludes the output of producers outside the Milk Marketing Scheme. 12/ Years ending August 31. 13/ Years ending June 30.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, United States Foreign Service Reports, and other information. - April 29, 1952.

CONDENSED AND EVAPORATED MILK (Whole and Skim): Production, net trade and consumption, principal countries, prewar average, 1949 and 1950, preliminary.

Countries	Production		Imports		Net trade		Apparent consumption		Per capita consumption			
	Prewar 1/	1949	1950	Million pounds	Imports	Exports	1949	1950	Prewar 1/	1949	1950	
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Pounds	Pounds	Pounds	
Canada	104	269	288	-	24	-36	-37	207	251	7.1	16.5	19.3
United States	2,470	3,860	3,939	-	59	-328	-178	2,410	3,700	18.5	24.8	25.0
Cuba	25	45	50	+	5	+	31	30	81	7.1	15.0	15.3
Austria	4/	-	-	+	4/	5/	+	4/	1	4/	0.1	0.2
Belgium	7	3	11	+	2	+	74	9	85	1.1	6.6	9.8
Czechoslovakia	1	9	6/	+	6/	6/	6/	1	6/	0.1	6/	6/
Denmark	41	82	9/	-	38	-81	-87	3	1	0.8	0.2	0.5
France	29	44	44	-	7	-13	-22	22	31	0.5	0.7	0.3
Ireland	17	29	20	-	14	7/-	7/-	3	2	1.0	0.7	0.3
Netherlands	365	261	380	-	352	-255	-337	13	6	4.3	0.6	4.3
Sweden	4	6	5	+	11	-1	-3	15	5	2	2.4	0.3
Switzerland	14	6/	6/	-	13	-8	-4	1	6/	0.2	6/	6/
United Kingdom	379	241	320	+	163	+	14	542	350	334	11.4	6.9
Argentina	3	12	17	-	5/	-1	-1	3	11	16	0.2	0.7
Union of South Africa	6/	33	40	+	3	+	1	6/	34	40	6/	2.8
Republic of the Philippines	-	-	-	+	43	+	100	43	122	100	2.7	6.4
Australia	42	135	144	-	19	-66	-75	23	69	8/	8.7	8.4
New Zealand	11	9/	9/	-	6	-24	-24	5	6/	6/	3.1	6/

1/ Prewar averages are for years 1935-39 for Canada and Cuba, 1937 and 1938 for the Netherlands, 1937 for Czechoslovakia, France, Ireland and Sweden, 1939 for Argentina, and 1934-38 principally for others. 2/ Adjusted for stocks. 3/ Adjusted for stocks and shipments, and represents civilian consumption only. 4/ Converted and added to fluid milk. 5/ Less than 500,000 pounds. 6/ Not available. 7/ Estimated. 8/ Years ending June 30. 9/ Canned milk production and dried milk production no longer reported separately.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, United States Foreign Service Reports, and other information. April 29, 1952.

DRIED MILK: Production, net trade and consumption, principal countries, prewar average, 1949 and 1950, preliminary

Countries	Production		Net trade		Imports; - Exports		Apparent consumption		Per capita consumption	
	: Prewar 2/	: 1949	: 1950	: Prewar 2/	: 1949	: 1950	: Prewar 2/	: 1949	: 1950	: Prewar 2/
	: Mil.Lbs.	: Mil.Lbs.	: Mil.Lbs.	: Mil.Lbs.	: Mil.Lbs.	: Mil.Lbs.	: Mil.Lbs.	: Mil.Lbs.	: Pounds	: Pounds
Total Dried Milk 1/	:	:	:	:	:	:	:	:	:	:
Canada	26	76	68	- 6	- 34	- 17	21	3/ 79:3/ 87	1.9	5.8
United States	246	1,061	1,006	- 1	- 120	- 98	243	4/ 520:4/ 591	1.9	3.6
Cuba	5/	5/	1	5/	2	3	6/	2	6/	0.4
Austria	7/	5/	5/	7/	1	2	7/	2	7/	0.2
Belgium	6	8	9	6	9	13	12	17: 22	1.4	2.0
Czechoslovakia	1	6/	6/	5/	6/	6/	1	6/ 6/	0.1	6/
Denmark	2	20	6/	- 1	- 17	- 19	1	3/ 6/	0.3	6/
France	8	6/	15	- 1	23	7	7	6/ 22	0.2	6/
Ireland	2	8/	6	- 1	- 3	- 5	1	1	0.3	0.3
Netherlands	56	62	91	- 37	- 48	- 30	19	14: 61	2.2	1.4
Sweden	1	33	19	1	- 11	- 15	2	22:3/ 12	0.4	3.1
Switzerland	7	6/	6/	- 3	1	-	4	6/ 6/	1.0	6/
United Kingdom	34	66	91	31	78	76	65	144: 167	1.4	2.9
Argentina	4	13	12	5/	- 1	5/	4	12: 12	0.3	0.7
Union of So. Africa	6/	3	4	1	1	5/	6/	4	6/	0.3
Rep. of the Philippines	--	--	--	1	4	6	1	4	0.1	0.2
Australia	9/ 17	67	63	9/ - 3	- 33	- 35	9/ 14	34: 28	2.0	4.3
New Zealand	17	10/	10/	- 16	- 53	- 67	1	6/ 6/	0.6	6/
Dried whole milk only	:	:	:	:	:	:	:	:	:	:
Canada	5	13	16	- 4	- 6	- 9	1	3/ 8	0.1	0.6
United States	18	126	129	--	- 94	- 77	16	4/ 37:4/ 46	0.1	0.2
Argentina	4	13	12	5/	- 1	5/	4	12: 12	0.3	0.7
Union of So. Africa	6/	2	2	1	1	5/	6/	3	6/	0.2

1/ Total dried whole and dried skim milk for human consumption. 2/ Prewar averages are for years 1935-39 for Canada, 1937 and 1938 for Ireland, 1937 for Czechoslovakia and France, 1938 for Sweden and New Zealand, 1939 for Argentina and 1934-38 principally for others. 3/ Adjusted for stocks. 4/ Adjusted for stocks and shipments, and represents civilian consumption only. 5/ Less than 500,000 pounds. 6/ Not available. 7/ Converted and added to fluid milk. 8/ Estimated. 9/ Years ending June 30. 10/ Canned milk and dried milk production no longer reported separately.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U. S. Foreign Service Reports, and other information.-April 29, 1952.



FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS,
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD 3-52)

1.943

F117

May 5, 1952

THE DAIRY INDUSTRY IN MEXICO

Reserve

Table of Contents

	Page		Page
Outlook and Summary.....	1	Prices.....	30
Principal Dairy Districts.....	3	Foreign Trade.....	35
Dairy Cattle Population.....	6	Government Regulations of	
Diseases and Parasites.....	10	the Industry.....	38
Feeding Practices.....	12	Dairy Associations.....	42
Volume of Production.....	12	Appendices:	
Dairy Products.....	13	Dairy Statistics	
I. Fluid Milk.....	13	(Tables 1-11).....	46
II. Processed Milk.....	23	Regulations for the	
III. Butter.....	27	Registration of Foods,	
IV. Cheese.....	28	Beverages, and similar	
V. Ice Cream.....	29	Products.....	57

OUTLOOK AND SUMMARY

Recent developments in the Mexican dairy industry indicate an upward trend in production and show prospects for a marked improvement in the quality of the output. The industry has definitely emerged from the period of decline and slow recovery which followed the outbreak of foot-and-mouth disease in December 1946 and the outlook is now for a more rapid expansion than has been possible heretofore. Among the developments pointing in the direction of increased production are: (1) a new interest in enlarging herds on the part of dairymen in the chief producing districts; (2) herd improvement through the importation of good sires and through a beginning of the practice of artificial insemination; (3) the granting of special governmental credits for dairy production; and (4) the building of new plants for pasteurizing and processing milk. At the same time, efforts are being made to improve the quality of milk supply in the principal consuming centers. Among these may be mentioned: (1) the enactment for the first time in several cities of regulations requiring the compulsory pasteurization of milk; (2) plans now being developed for improving milk transportation facilities and (3) the recent establishment of a private association of milk producers for the purpose of guaranteeing the purity of the product sold by its members.

Prepared in the Livestock and Wool Division, OFAR, and based upon information supplied by Ana M. Gomez.

The predominating dairy breed in Mexico is the Holstein, approximately 80 percent of the grade cows in the country being of this breed. Other breeds of some significance are the Brown Swiss and the Jersey. The most important dairy district in the country is the Mexico City milkshed with a dairy cattle population of about 75,000 head and a production of about one million pounds of milk per day. Other important dairy districts include: the Jalisco-Michoacan district, the Monterrey milkshed, the state of Chihuahua, the Queretaro-Guanajuato district, the state of Veracruz, and the state of Chiapas.

The most prevalent cattle disease in the leading dairy districts of Mexico are brucellosis, mastitis, and tuberculosis. Although considerable progress has been made in the campaign against bovine tuberculosis, little improvement has been obtained in the case of brucellosis or mastitis. In the sub-tropical districts of the country, tick fever accounts for considerable losses among dairy cattle.

The dairy industry of Mexico is principally a pasture industry, except for areas close to Mexico City and other major consuming centers. In the Mexico City milkshed, the feeds most commonly used are alfalfa, corn fodder, wheat bran, and oilseed cakes and meals. Production per cow is estimated at about 18 pounds per day in the Mexico City milkshed and probably does not exceed 11 pounds for the country as a whole.

Total consumption of cow's milk in Mexico is estimated at about 155 pounds per capita a year, or less than 20 percent of United States consumption. It is higher than this average among the urban population and almost negligible in rural areas. Approximately 43 percent of the total quantity of milk consumed in Mexico City is pasteurized at the present time. According to regulations in force, the total supply of the city must be pasteurized after March 8, 1952. It is reported that since that date, all milk consumed in the district is being pasteurized with the exception of 185,000 to 225,000 pounds coming from very small producers who do not have facilities to pasteurize. Other cities where a significant proportion of the milk is pasteurized include: Monterrey, Hermosillo, Torreon, and Mexicali with over 90 percent; and Chihuahua, Ciudad Juarez and Piedras Negras with from 75 to 90 percent.

The distribution of milk in bottles and through home delivery is rapidly being adopted in many of the larger cities of Mexico. In Mexico City the bulk of the milk consumed is sold bottled and either through home delivery or through milk depots and other stores. Outside of the leading consuming centers, however, the system of dipping from a large can into the consumer's container still prevails.

Costs of milk production have risen steadily in Mexico during the past few years. The increase has taken place in practically all items in the cost of production, including feeds, wages, and the price of cattle. Increasing costs in the Federal District are gradually causing a movement of producers in the Mexico City milkshed away from the District and toward more favorable areas.

The Mexican Government is promoting this movement through the granting of credits for the expansion of dairy production in the periphery or outside of the present milkshed. The goal of this program is to triple the present supply of milk for Mexico City.

The bulk of the evaporated and condensed milk consumed in Mexico is supplied by three local plants. In the case of powdered milk, however, the country still depends on imports for nearly 80 percent of its requirements. Imports of powdered milk exceeded 2.4 million dollars in 1951. 1/

Consumption of butter is extremely low in Mexico, being estimated at less than four-tenths of a pound per year per capita. Outside of Mexico City and a few of the larger centers, butter consumption is insignificant. Total production, including factory and farm butter, is estimated at about 11 million pounds per year. Imports of this commodity are negligible.

Production of cheese in the country takes place largely on farms. Of a total production in the neighborhood of 33 million pounds a year, not more than 5.7 million pounds represent factory production. Farm production includes a variety of cheeses typical of the various regions of the country. Factory production is limited largely to Cheddar and process cheese. Imports in 1951 were under 1.1 million pounds and represented chiefly process cheese from the United States and European cheeses, principally from the Netherlands, Switzerland, Denmark, and Italy.

Ice cream production in 1951 is estimated at about 2.75 million gallons for the country as a whole. This production is centered largely in Mexico City, with an output of over 1.25 million gallons.

The price of fluid milk in Mexico has been established officially at from about 8.7 to 10.9 cents per quart, depending on grade and place of delivery. A group of fifteen of the leading dairies have obtained an exemption from the price regulations and are selling their product at from 10.9 to 16.4 cents per quart, home delivered. Prices for condensed, evaporated and powdered milk are also regulated by law, but those for butter, cheese and ice cream are freely established. Prices for dairy products have followed the steady upward trend in food prices which has taken place in recent years.

PRINCIPAL DAIRY DISTRICTS

The principal milk-producing districts of Mexico,--(See map on following page),--in the order of their importance, are as follows: (1) the Mexico City milkshed; (2) the Jalisco-Michoacan District; (3) the Monterrey milkshed; (4A) the Chihuahua City- Cuauhtemec District; (4B) the Ciudad Juarez-Nuevo Casas Grandes District; (5) the Queretaro-Guanajuato District; (6A) the Veracruz City milkshed; (6B) the Tampico-Tuxtepec District; and (7) the Chiapas Area. A brief description of each one of these districts and an indication of the volume of their production follows.

1/ Appendix Table 1 gives the average value of the pesos in United States currency from 1940 through 1951.

Mexico City milkshed

The fluid milk consumed in Mexico City is produced largely within a radius of 50 miles. The chief centers of production are located within this radius in all directions except directly south. The total quantity of fresh milk consumed daily in the city was estimated in July 1951 by the Milk Department of the Ministry of Health at about 1 million pounds. Of this total, it is reported that 45 percent, was produced within the Federal District; 53 percent, was introduced from the state of Mexico; and the remaining 2 percent, was brought from the states of Puebla, Tlaxcala, and Hidalgo. According to the records of the Milk Department, the milk consumed in the city is supplied by 1,500 farms with a total dairy cattle population of about 75,000 head, including cows, calves and bulls. 2/

During the dry season, and particularly during the months of February and March when the volume of production is at its lowest, milk comes into Mexico City from far more distant areas. In some instances, the distance over which milk is transported extends to 125 to 155 miles by road.

The Mexico City area is important also as a producer of butter and cheese. The cream for the manufacture of butter is not produced within the milkshed but is brought from other districts. Cheese production is limited to process cheese made from cheese brought from outside the milkshed.

Jalisco-Michoacan District

This district comprises the northeastern part of the state of Jalisco (including principally the areas surrounding Guadalajara, Lagos, Ocotlan, and La Barca) and the northern part of Michoacan (including Jiquilpan, La Piedad, Sehuayo, and Zamora). It supplies the fluid milk requirements of Guadalajara, the second largest city in Mexico, as well as the needs of about a dozen processing plants. There are two large plants in the district, one at Ocotlan and another at Lagos de Moreno, producing condensed, evaporated, and powdered milk. In addition, there are a number of smaller plants producing cheese, butter, ice cream, and cajeta (milk candy). Mexico City is the market for the bulk of the processed milk as well as for part of the butter and cheese production of this district.

There is no information on the total number of dairy cows in the district but it is reported that a steady increase has taken place during the past few years. The rise in cow numbers has been encouraged both by the increased consumption of fluid milk in Guadalajara and by the demand of milk for processing. No statistics are available on total milk production in the district. Unofficial sources estimate the average daily consumption of the various processing plants in the district at about 227,000 pounds. In addition, about 250,000 pounds are consumed daily as fluid milk in the city of Guadalajara.

2/ Appendix Table 1A gives number of dairy farms, number head of cattle, and daily milk production in the Mexico city milkshed.

Monterrey milkshed

The area surrounding Monterrey supplies this city, the third largest in Mexico, with approximately 185,000 pounds of milk a day. It also supplies ten processing plants located within the city producing chiefly butter, cheese, and ice cream. These plants consume approximately 100,000 pounds of milk per day. A large proportion of the milk used by the processing plants, however, consists of goat's milk. It is reported that at least half of the milk used for butter and cheese production is goat's milk.

Chihuahua

Production of milk in the state of Chihuahua is centered largely in the central part of the state, in the area surrounding Cuauhtemoc and Chihuahua City. In addition to supplying the fluid milk consumed in Chihuahua City, estimated at about 50,000 pounds per day, the district supplies a number of cheese factories. There are 12 cheese factories in Cuauhtemoc and one in Chihuahua City. The total quantity of milk consumed by these 13 plants is estimated to average about 70,000 pounds per day. Both the milk producing and cheese manufacturing industries in the Cuauhtemoc area are owned and operated by a colony of Mennonite farmers of German origin who emigrated from Canada to Chihuahua in the early twenties.

There is a second dairy district in Chihuahua located in the northern part of the state, in the neighborhood of Ciudad Juarez and Nuevo Casas Grandes. This area supplies the fluid milk requirements of Ciudad Juarez, estimated at 40,000 pounds of milk per day, and two plants located in the Mormon colonies near Nuevo Casas Grandes, producing a small quantity of cheese and butter.

Queretaro-Guanajuato

This district comprises the area between San Juan del Rio and Queretaro City in the state of Queretaro and the central and southern parts of the state of Guanajuato. It adjoins the northern part of the Jalisco-Michoacan district. The principal centers are Irapuato, Silao, San Miguel Allende, Celaya, Queretaro and San Juan del Rio. There is a large processing plant in the city of Queretaro producing evaporated milk. This plant draws its supply from as far west as Leon. Part of the district's production is shipped to the processing plant at Lagos de Moreno, in the state of Jalisco. The district also supplies the fluid milk requirements of Queretaro, Guanajuato, Leon, and other cities located within the two states. Production in this district is estimated at from 135,000 to 180,000 pounds per day, used partly for local consumption and partly for processing.

Veracruz

The area surrounding the city of Veracruz, and extending west to Cordoba and Orizaba constitutes the principal milk producing district in the state of Veracruz. This district supplies the fluid milk consumed in

the city of Veracruz, estimated at about 110,000 pounds of milk per day, as well as in other centers located in the central part of the state. Another important district in the state of Veracruz is the area from Poza Rica north to Tampico. The chief consuming center in this district is Tampico, with a daily intake of about 60,000 pounds.

Chiapas

This district includes the area from Arriaga to Ocozocuáutla and Tuxtla Gutierrez. Total production is estimated at about 70,000 pounds per day and is used principally in the production of a type of cheese known locally as queso bola de Chiapas.

Other Districts

Other dairy districts of some importance are those surrounding other large centers of population such as Torreon, with a daily consumption of 80,000 pounds, and San Luis Potosi, with about 40,000 pounds.

In Merida, the fourth largest city in Mexico, consumption of fresh milk is very low. The total number of dairy cows in the state of Yucatan is estimated at only 3,000, with a production not exceeding 35,000 pounds per day. The lack of transportation facilities prevents the introduction of fresh milk from other areas and results in the substitution to a large extent of processed milk, chiefly evaporated and powdered.

DAIRY CATTLE POPULATION

Cattle numbers

There are no recent official statistics on the number of milk cows in Mexico. The latest estimate available is for 1940 and gives the total number of cows milked regularly in the country as 797,785. The 1950 census data are not expected to become available until the middle of 1952.

Information obtained from unofficial sources would indicate that there was a gradual increase in milk cow numbers in Mexico during the period from 1940 to 1946. From 1947 to 1949, on the other hand, a sharp decline took place in the cow population. The foot-and-mouth epizootic, which broke out in Veracruz in December 1946, reached the Mexico City milkshed and other areas in the central region of the country early in 1947. The spread of the disease resulted in a drastic reduction in the number of milk and dual-purpose cows through the slaughter program instituted in an effort to eradicate it. Even in areas where the slaughter program was not put into effect, such as the Mexico City milkshed, a substantial reduction in numbers took place as a result of the slaughter of cows which had gone dry after having recovered from the disease. The decline in the milk cow population in central Mexico from 1947 to 1949 as a result of foot-and-mouth disease is estimated at approximately 30 percent. Recovery from this decline was slow in starting. Even after evidences of the disease had disappeared from the area, dairymen were reluctant to replace their slaughtered animals because of fear that the new animals might contract the disease. Imports of dairy cattle virtually ceased from 1947 to 1949.

Since the middle of 1950, a new interest is evident on the part of dairymen in enlarging their herds. This has been done through bringing grade and high-grade cows from other parts of the country and also, to some extent, through a renewal of imports of high-grade and purebred heifers and bulls. These developments reflect confidence in the successful termination of the foot-and-mouth disease campaign in the near future.

The only district for which an estimate of the present dairy cattle population is available is the Mexico City milkshed. As stated above, this estimate is based on data obtained from the Milk Department of the Ministry of Health. According to this estimate the total dairy cattle population in the Mexico City milkshed at present is approximately 75,000 head, of which about 31,600 are located in the Federal District and 41,000 in the state of Mexico. The number of milk cows in the entire milkshed is estimated at about 60,000.

Breeds

In the principal milk-producing districts of Mexico, the cow population consists principally of a cross between the native cow and one of the dairy breeds. The cows range from low to high grade, with very few purebreds. In a few areas, such as the Mexico City milkshed, the breeding up of dairy herds has proceeded for many years. High-grade heifers and purebred bulls have been imported from the United States and Canada. As a result, several fine herds have been developed. Outside of these areas, however, milk cows are generally low grade. In some northern districts beef types, such as Herefords, are used for milk production, and in southern and coastal regions, most of the milk consumed is produced by the common or "corriente" cow.

The most popular dairy breed in Mexico is the Holstein, known locally as Holandesa. It is estimated that approximately 80 percent of all dairy cows in Mexico are grade Holsteins, 15 percent Brown Swiss, and 5 percent Jerseys. There is an insignificant number of Ayreshires and practically no Guernseys. In the Mexico City area, the proportion of Holsteins is believed to be higher, probably 90 percent, with Brown Swiss and Jerseys following in importance in that order. In the Jalisco-Michoacan district, the second milk-producing district in the country, about 75 percent of the dairy cows are Holstein, 10 percent Brown Swiss, and 2 percent Jersey. In the Monterrey district, it is reported that Holsteins do not adapt themselves well to the climate and that their milk production is considerably less than in colder districts. The most common dairy cow there seems to be a cross between the Holstein and the Jersey. Along the tropical regions of the Gulf Coast, including the states of Veracruz, Tabasco, and Yucatan, the Brown Swiss is found in larger numbers than other dairy breeds. It is frequently crossed with Zebu and with Holstein stock.

A register of dairy breeds is kept by the Direccion General of the Ministry of Agriculture and Animal Industry, but it is reported that only a small proportion of the dairy cattle in the country is included in that register. There are no dairy breeders' associations in Mexico at the present time.

Imports of cattle of dairy breeds

The improvement of cattle for dairy production in Mexico dates back to 1870, when the first importations of cattle of dairy breeds took place. In that year, a few Brown Swiss and Jersey cattle arrived in the country. In 1872, Holstein cattle were imported for the first time. These importations were both from Europe and from the United States. Importation of dairy cattle was suspended as a result of the Mexican Revolution in 1910 but was resumed about ten years later. Interest in dairy cattle improvement was further stimulated by initiation of Annual National Livestock Expositions by the Ministry of Agriculture in 1920. The years 1945 and 1946 are significant as those of the heaviest importation of dairy cattle on record. Nearly 12,000 head arrived during those two years, of which more than 11,000 came from the United States and the remainder from Canada. ^{3/} The outbreak of foot-and-mouth disease in December 1946 caused a sharp drop in dairy cattle imports. During the following three years the number of head imported was under 400 per year. The outbreak of foot-and-mouth disease also resulted in the cancellation of the annual expositions. It is not expected that the latter will be resumed until the country is declared free of foot-and-mouth disease.

A significant rise in dairy cattle imports took place in 1950. A total of 1,379 head arrived that year, of which 1,206 came from the United States and 162 from Canada. At the present time, there is an increasing interest on the part of Mexican dairymen, particularly in the Mexico City milkshed, in improving their herds. A few of the wealthier dairymen in the district vie with each other in obtaining registered sires and high-grade heifers. The owner of one of the best dairy herds in the milkshed recently imported a lot of 40 heifers from Canada at a price of about 500 dollars each. These heifers were shipped by rail from Canada to the Mexican border at Laredo, and from that point by air to Mexico City. Transportation costs amounted to 110 dollars per animal. It is reported that this same dairy has just completed the purchase of an All-American sire.

Artificial insemination

In order to encourage breed improvement among dairy herds in Mexico, the Ministry of Agriculture and Animal Industry has established an artificial insemination station at Palo Alto, just outside of Mexico City. The work was started in November 1950 with 5 bulls. At the present time there are 13 Holstein bulls at the station, imported from Canada and from the United States. The age of these bulls ranges from five to six years. The finest one in the group is Raymondale Yalta, a six-year old Holstein sire, purchased in Canada last year, at a price of twelve thousand dollars. It is reported that this bull brought the highest price at the 1946 National Exposition of Canada.

^{3/} See Appendix Table 2 giving number of head and value of dairy cattle imports, by country of origin, from 1940 through 1951.

Since the initiation of the work of this station, a total of 1,400 cows have been inseminated. Collections of semen from each bull are limited to once a week. A charge of \$5.78 is made per cow, including up to three services.

Artificial insemination stations have also been established by the Ministry in Veracruz, where there are three Brown Swiss bulls in service, and in Queretaro, with two Jersey bulls. A fourth station will soon be inaugurated in Torreon with four Holstein sires.

Although the scope of this work is still small compared to the needs of the dairy industry, it has served a very useful purpose in stimulating interest in breed improvement. A few of the more progressive dairies have already started the use of artificial insemination with their own sires. There is a great need at the present time for trained personnel for this work. To meet this need, the National Veterinary School started a course on artificial insemination last year and it is planned to send a few men to the United States for further training.

Size of herds

Dairy herds in the Mexico City milkshed range from only 2 or 3 cows to about 1,000. According to data obtained from the Milk Department of the Ministry of Health, the average size of herds in the milkshed is 49 head, including cows, calves and bulls. ^{4/} It is reported that the minimum size for a commercial dairy farm is 100 cows. Smaller herds are considered uneconomical for a commercial dairy and are found only on farms where the production of milk is not the principal source of income. There are about fifteen dairies in the Mexico City milkshed, with over 500 cows each and only one with as many as 1,000. On the other hand, there is a very large number of extremely small herds. This multitude of small producers makes the sanitary supervision of milk production by the Ministry of Health a very difficult problem. Of the total of 1,513 dairy farms in the milkshed only 252, or 17 percent, are registered with the Milk Department of the Ministry of Health, as required by law of all producers supplying milk to the Federal District. This small proportion of the total number of dairy farms accounts for 85 percent of the total number of dairy cattle and produces 82 percent of the total quantity of milk consumed in the Federal District. While the average number of cattle (including cows, calves and bulls) in registered farms is 239, that in the unregistered farms is only 9.

In other dairy districts, herds are generally much smaller on the average than in the Mexico City milkshed. In the Jalisco-Michoacan district the most common size of herd contains from 30 to 40 head. The average size for the country is difficult to estimate because of the lack of reliable information but most sources believe it is in the neighborhood of 25 head.

^{4/} Appendix Table LI.

DISEASES AND PARASITES

Foot-and-mouth disease

Early in 1947, most of the dairy herds in the Mexico City milkshed were infected with foot-and-mouth disease. In order to maintain a supply of milk for the city, it was decided not to slaughter dairy herds in the area until the last stage of the campaign against the disease. The program was to start slaughter in the periphery of the infected zone and gradually work towards the center at Mexico City. The policy of all-out slaughter was later changed for one of vaccination and slaughter, which called for the latter only in cases of new outbreaks. By the time this change in policy took place, symptoms of foot-and-mouth disease had virtually disappeared from the Mexico City milkshed. Losses from the disease are estimated at only about 5 percent for adult cows but as high as 50 percent for calves less than 6 months old. Although mortality among cows was low, many of those which recovered went dry or declined considerably in milk production. There was also a high percentage of abortions resulting in permanent sterility. According to the Director General of Livestock, about 20 percent of the total number of cows in the Mexico City milkshed either died as a result of the disease or were slaughtered because of a decline in production after recovering from it. The losses were heavier in dairies where the cows were not properly fed and where sanitary conditions were inadequate. By the end of 1948, foot-and-mouth disease had virtually disappeared from the Mexico City milkshed, although a few minor outbreaks were reported during 1949. The last outbreak in the area occurred in October 1949.

Other diseases

The most prevalent diseases among dairy cattle in the Mexico City milkshed at the present time are brucellosis, mastitis, and tuberculosis. Recent investigations by the Livestock Division of the Mexican Ministry of Agriculture and Animal Industry would indicate that incidence of brucellosis is as high as 65 percent in some herds. For the milkshed as a whole, reliable sources place it at from 25 to 30 percent. The Milk Department of the Ministry of Health has conducted a campaign against this disease in the Mexico City milkshed for the last ten years, but results have been negligible largely because the funds allocated have been insufficient to carry out an effective program. A slight improvement is reported to have taken place during the past year, but brucellosis is still the most prevalent dairy cattle disease in the district. Trials were made recently with strain 19 vaccine imported from the United States but a vaccination program has not been developed as yet.

The second most serious disease among the dairy cattle population of the Mexico City milkshed is mastitis. The incidence of mastitis in the district is estimated at from 20 to 25 percent. The Chief of the Milk Department of the Ministry of Health made the statement a few months ago that losses to dairymen in the milkshed during 1950 from brucellosis and mastitis exceeded 4 million dollars.

Reports from the Milk Department indicate that considerable progress has been made in the Mexico City milkshed in the eradication of bovine tuberculosis. The campaign against this disease in the district was started twenty-six years ago. The tuberculin test is performed twice a year in registered herds from which milk is sold raw and once a year in those supplying milk to the pasteurizing plants. All animals giving a positive reaction are ordered to be slaughtered. A recent report by the Milk Department shows that of a total of 88,720 head tested during the 16 month period from March 16, 1950 to July 16, 1951, in the Mexico City milkshed, 1,033 or 1.2 percent, showed a positive reaction. The incidence of tuberculosis in unregistered herds is of course much higher. The owners of these unregistered herds operated outside of the province of the law and generally do not comply with the regulations with respect to the tuberculin test or with other regulations concerning the production and handling of milk. As stated in a previous section, unregistered herds comprise approximately 15 percent of the dairy cattle population in the Mexico City milkshed.

Little information is available on the incidence of dairy cattle diseases outside of the Mexico City milkshed. It is generally believed, however, that, with the exception of a few well-managed herds, the degree of infection in other districts of the country is much higher than in the Mexico City milkshed.

Parasites

The Mexico City milkshed and other dairy districts located at high altitudes, are fairly free of external parasites, except for lice and ear ticks. On the other hand, severe parasite infestations are found in all the tropical areas of Mexico. The most serious parasite in such areas is the fever tick. Efforts at eradication through dipping in arsenical solutions have been largely unsuccessful. A start is now being made in the use of gamoxane which it is hoped will prove more effective. The Ministry of Health is now preparing an ambitious program for the eradication of the fever tick in all the tropical areas of the country. It is planned to submit this program to the consideration of the new administration which will take office in December 1952. In view of the extensive infestations of fever ticks in the lower-lying dairy districts, dairymen in those districts have tried to develop breeds of dairy cattle resistant to tick fever, usually through crossing Brown Swiss with Zebu.

Another parasite which seriously affects dairy cattle in the tropical districts of Mexico is the liver fluke. Infestations of flukes are found chiefly in the Jalisco-Michoacan district and in the Gulf coasts, particularly in the more humid districts of Veracruz and Tabasco.

FEEDING PRACTICES

The dairy industry in Mexico is principally a pasture industry, except for areas surrounding the major consumption centers. In the Mexico City milkshed, the industry is based almost exclusively on continuously-stabled herds. In areas near other major centers of consumption herds are largely on pasture but receive some supplementary feeding of concentrates every day.

A typical daily ration for high-grade dairy cows in production in the federal District includes 18 pounds of alfalfa hay, 11 pounds of corn fodder, 4 pounds of wheat bran, and 2 pounds of oilseed cake. In the Jalisco-Michoacan district herds are pastured almost continuously, but some prepared feeds and grains are fed all year, particularly in the dry season. The prepared mixes used in that region include oilseed cakes and meals, garbanzos, alfalfa, wheat bran, and molasses. It is reported that there is an increasing interest on the part of dairymen in the region in the use of such mixes. One of these is prepared and sold by the largest milk processing plant in the region as a means of stimulating an improvement in feeding practices. A beginning is also being made in this district in the use of lime peel as a feed. A lime processing plant located at Apatzingan, in the state of Michoacan, is shipping 44 tons of lime peel feed to the district weekly. In the Cuauhtemoc district of Chihuahua, where most of the cheese and butter produced in the state originates, the dairy industry is principally a pasture industry. In dry years, when the grain crops are poor, such as in 1950, corn stalks are used largely for forage for dairy cattle, but when rainfall is abundant, pastures are depended upon almost exclusively as a source of feed. In the area surrounding Chihuahua City, it is customary to supplement pasture feeding with grains and cut alfalfa throughout the year.

VOLUME OF PRODUCTION

Production per cow

Average milk production for dairy cows throughout Mexico is estimated to be approximately 11 pounds per day, based on a 365-day year. Production of course varies considerably from district to district and from herd to herd. In the Mexico City milkshed, where some of the best herds are found, production per cow ranges from 11 to 27 pounds, with an average of about 18 pounds. In the better dairy farms, having high-grade Holstein cows and good management practices, average daily production for the herd is seldom below 23 but does not often reach 27 pounds per cow. The average for individual cows is of course, higher, reaching up to 32 pounds per day.

The average length of the productive life of cows in the Mexico City milkshed is estimated at five years. Even in the best herds the period of production seldom goes beyond eight years. On the other hand, it is well under five years in those where the incidence of mastitis and other diseases is high. The average lactation period is from 9 to 10 months.

Total output

There are no recent statistics on total production of milk in Mexico. The latest estimate available is that contained in the 1940 Census showing a total of 3 billion pounds. This represents total production of cow's milk, including not only that consumed as fluid milk but also that used in the manufacture of other dairy products. This production allows a per capita annual consumption of about 155 pounds, only 19 percent of the United States intake for that year of 821 pounds. A large proportion of this consumption takes place in urban centers. Among the rural population, milk is still considered a luxury.

At the present time, total production of cow's milk in Mexico is believed to be from 10 to 15 percent higher than in 1940. Most reports indicate a steady upward trend in production throughout the country from that time up to the outbreak of foot-and-mouth disease in December 1946. The spread of the disease to central Mexico and the slaughter campaign initiated against it, resulted in a sharp drop in milk production in this part of the country. Three important milk-producing centers were involved in this decline: the Mexico City milkshed, the Jalisco-Michoacan district, and the Queretaro-Guanajuato district. As mentioned above, a decrease in milk cow numbers of about 50 percent is believed to have occurred in this area as a result of foot-and-mouth disease. The decline in milk output continued for two or three years after the disease reached the area, but by the middle of 1951, production is reported to have slightly exceeded its previous level.

In the principal dairy districts outside of the area affected by foot-and-mouth disease, production of milk has continued its steady upward trend to the present time, with the exception of the Chihuahua district. A severe drought there during the past two years has brought about a sharp curtailment in milk and cheese production.

In addition to the production of cow's milk mentioned above, a certain amount of goat's milk is produced in Mexico, principally in the northern states of Coahuila, Nuevo Leon, San Luis Potosi, and Zacatecas, and in a few central states such as Guanajuato and Michoacan. There are no statistics on production of goat's milk since the 1940 Census, which showed a total of 370 million pounds for the entire country. This milk is used mainly in the production of butter, cheese, and a type of candy known locally as cajeta.

DAIRY PRODUCTS

I. Fluid Milk

A. Consumption

Data on the consumption of fluid milk are available for only a few of the larger cities in the country. Official statistics of the Direccion General de Estadistica on the consumption of fluid milk since 1940 in the

Federal District, which includes Mexico City and adjacent areas, show an upward trend up to a peak of 380 million pounds in 1943. ^{5/} The trend was reversed the following year with a decline to 350 million pounds in 1945. Thereafter, total consumption in the District remained below previous levels until 1950 when, according to these statistics, a new record of 520 million pounds was reached. The latter represents an increase of 74 percent over the reported consumption for 1949 of 300 million pounds. Total consumption in 1951 dropped to approximately 450 million pounds.

A consumption of 520 million pounds, such as reported for the Federal District for 1950, represents a daily intake of 1.4 million pounds. Informed trade sources are generally of the opinion, however, that this estimate is too high. As mentioned on page 3, the records of the Milk Department of the Ministry of Health show a daily consumption of fresh milk in the Federal District at the present time of slightly over 1 million pounds, or approximately 387 million pounds a year. This is believed to be the best estimate available of consumption of fresh milk in the Federal District. To this must be added approximately 150,000 pounds per day of reconstituted powdered milk, giving a total daily consumption of fresh and reconstituted milk of about 1.2 million pounds. This is equivalent to an annual consumption of about 440 million pounds or a per capita intake of 64 liters per year.

The sale of reconstituted milk was initiated in Mexico City early in 1947, at a time when supplies of fluid milk were particularly short as a result of the foot-and-mouth epizootic. There are at present two plants reconstituting powdered milk in the city. Although at first whole powdered milk was used for this purpose, the high prices prevailing for this type of milk has resulted in the substitution of nonfat dry milk solids, to which vegetable fats are added. The fats used are coconut, cottonseed, peanut or sesame, coconut being usually preferred.

The following tabulation shows total and per capita consumption of fluid milk during 1950 in a few of the leading cities of Mexico, other than Mexico City:

	<u>1950 Consumption of Fluid Milk 1,000 pounds</u>	<u>1950 Population Number of Inhabitants</u>	<u>Annual Per Capita Consumption Pounds</u>
Guadalajara	91,221	379,401	240
Monterrey	68,100	330,012	206
Torreon	29,022	128,557	225
San Luis Potosi	14,710	126,601	116
Ciudad Juarez	14,117	121,913	116
Veracruz	39,158	113,803	345
Tampico	20,714	97,673	211
Chihuahua	19,079	86,796	220
Mexicali	13,857	64,701	214
Tijuana	10,215	60,740	163
Nuevo Laredo	8,683	57,488	152
Matamoros	8,172	43,830	186
Mazatlan	a/ 5,971	42,303	118
Reynosa	2,497	34,212	75
Piedras Negras	3,314	27,586	120
Guaymas	1,816	18,817	98

a/ 1949 consumption.

The lower per capita consumption in Mexico City as compared with many of the other larger cities of the country is explained largely by a higher per capita intake of condensed, evaporated, and powdered milk. A large proportion of the total consumption of these products in the country takes place in Mexico City both for infant feeding and as a substitute for fresh milk by adults.

B. Extent of Pasteurization

1. Mexico City

According to a report of the Milk Department of the Ministry of Health dated July 23, 1951, the number of pasteurizing plants in the Federal District, and the quantity of milk treated at such plants daily on that date, was as follows:

	Number of <u>Plants</u>	Quantity of Milk <u>Handled Dairy</u> <u>Pounds</u>
Public plants	9	370,000
Private plants	<u>8</u>	<u>85,000</u>
Total	17	455,000

The public plants mentioned above are not government-owned plants but rather privately-owned plants to which dairymen not having their own plants may bring their milk to be pasteurized. The 455,000 pounds pasteurized daily represent 43 percent of the total of about 1 million pounds consumed in the Federal District. A few of the larger public plants now functioning have a capacity to treat a much larger quantity of milk than they are now handling. It is believed that the combined capacity of the plants now operating would be sufficient to handle the total daily consumption of the Federal District.

The same report shows the following plants under construction or planned:

	Number of <u>Plants</u>	<u>Daily Capacity</u> <u>Pounds</u>
Under construction:		
Public	<u>a/1</u>	180,000
Private	<u>24</u>	<u>150,000</u>
Total	25	330,000
Planned:		
Public	1	35,000
Private	<u>23</u>	<u>120,000</u>
Total	24	155,000

a/ It is reported that work on this plant has been suspended for lack of funds.

The regulations now in force for the sale of milk in the Federal District 6/ provide that the sale of unpasteurized milk will not be tolerated after March 8, 1952, thirteen months after the date on which the regulations were published. This represents the second attempt on the part of the authorities to bring about total pasteurization of the milk supply of the District. The provision that all milk be pasteurized was contained for the first time in the regulations dated July 25, 1949, published in the Diario Oficial of August 2, 1949, which were superseded by those now in force. After insistent protests on the part of the District's dairymen, the enforcement of the pasteurization requirement of the regulations of August 1949 was postponed several times. It was claimed by the dairymen at that time that since most of the dairies did not have their own pasteurizing facilities, they would be forced to sell their milk to the four large pasteurizing plants which were the only ones having sufficient capacity to treat it. It was further claimed that since these four plants were under one management, a virtual monopoly of milk distribution would be created. In view of the strong opposition on the part of the dairymen, the enforcement of the regulations of August 1949 was finally abandoned. The object of the ten months' delay in the enforcement of the pasteurization requirement of the new regulations of February 1951, was to allow sufficient time for dairies not equipped with pasteurizing facilities to install their own plants and thus remove the objections previously raised to this provision.

It will be noticed from the data given above; that the plants under construction or planned, with only two exceptions, are small and private, that is, intended for the use of a single dairy establishment. It is believed by the authorities that once these plants have been completed there will be no further opposition to the enforcement of the pasteurization requirement from the owners of the registered dairy establishments which supply 82 percent of the total quantity of milk consumed in the Federal District. The difficulty in obtaining compliance with this provision is expected to arise in connection with the large number of unregistered producers supplying the remaining 18 percent of the milk consumed in the District and over whom the authorities have no control. These so-called "clandestine" producers are too small to have their own pasteurizing facilities and at the same time are strongly opposed to selling their milk to the pasteurizing plants. The problem of enforcing compliance on the part of these producers is a very serious one because their large number and small size makes inspection by the authorities extremely difficult and also because their withdrawal from the market would create a serious shortage of milk for some time. One solution now being studied by the authorities concerned with this problem is for the Government to purchase or build a pasteurizing plant to be leased or sold under favorable terms to these small producers.

6/ Dated February 2, 1951, published in the Diario Oficial of February 8, 1951, and effective thirty days after publication. For other provisions of these regulations see section entitled "Government Regulations of the Industry."

2. Other Cities

The proportion of the total milk consumed which was pasteurized during 1950 in a few of the leading cities of Mexico, other than Mexico City, is reported by the Consulates located in those cities as follows:

	<u>Percent</u>
Guadalajara	10
Monterrey	90
Torreon	0
San Luis Potosi	0
Ciudad Juarez	75
Veracruz	0
Tampico	13
Chihuahua	80
Mexicali	90
Tijuana	80
Nuevo Laredo	13
Hermosillo	90
Matamoros	0
Mazatlan	0
Raynosa	5
Piedras Negras	80
Guaymas	0

In Guadalajara, the second largest milk consuming center of Mexico, efforts to require pasteurization have met with opposition similar in nature to that found in Mexico City. A law providing that all milk sold in the city be either certified or pasteurized has aroused strong protests on the part of the milk producers in the area. ^{7/} It is claimed by this group that if such a requirement were put into effect, it would force them to turn their milk over to the one pasteurization plant in the city, thus creating a monopoly. The group has been joined in its opposition to the law by the operators of small retail milk stores in the city who would be forced by the regulations to either provide refrigeration facilities or go out of business. A test enforcement of the law was made on June 1, 1950, soon after the inauguration of the new pasteurization plant, and it was found that the plant could turn out only 125,000 pounds daily while the city's needs were almost twice that amount. The capacity of the plant has been expanded since then and it is claimed that it can now process over 225,000 pounds per day on a twelve-hour schedule. The owners of the plant have asked the State Government to enforce the pasteurization law once more but this request is still under consideration by the authorities. At the present time the plant is pasteurizing 45,000 pounds daily, or approximately 18 percent of the total consumption of the city. The plant actually receives 115,000 pounds of milk per day, but the remaining 70,000 pounds are not pasteurized. They are merely filtered, bottled and refrigerated. The lack of demand for a larger volume of pasteurized milk is due partly to the higher price charged for it, and partly to ignorance on the part of the consumer regarding the advantages of pasteurization.

^{7/} The law is contained in Decree 4931 of the State of Jalisco, dated December 23, 1943, and published in the official gazette of the State, El Estado de Jalisco, Volume CLVIII, Supplement, January 1, 1944.

The third largest milk consuming center in Mexico is Monterrey, which is also the third largest city in the country. A law requiring the pasteurization of all milk consumed within the city has been in force in Monterrey for some time and fines of from 11 to 23 dollars are imposed by the Health Department to introducers of "leche bronca" or unpasteurized milk. The Consulate at Monterrey reports a 90 percent compliance with the law. The success of the health authorities in the city in enforcing the pasteurization regulations is due at least partly to the fact that there are from 20 to 25 small dairy pasteurizing plants in the city, some of which are owned by the milk producers. The monopoly argument which has been raised both in Mexico City and in Guadalajara could not therefore be applied to the situation in Monterrey.

As may be noted from the above table, no milk was pasteurized during 1950 in Torreon, the fifth largest city in Mexico. This was due to the total lack of pasteurizing facilities. It is reported by the Consulate in that city that a pasteurization plant with a capacity for 225,000 pounds of milk a day started operations on February 8, 1951. Such a capacity is almost three times larger than the present daily consumption of milk in the city. The plant is now pasteurizing 75,000 pounds daily but this output is expected to be raised shortly to 90,000 pounds. The local government has now prohibited the sale of unpasteurized milk in the city.

In Mazatlan, a pasteurizing plant which had been in operation since May 1949 closed down in August 1950 because of the lack of cooperation from local dairymen. The latter refused to sell their milk to the plant claiming that it would create a monopoly.

C. Marketing

1. Mexico City

In the Mexico City milkshed there are at present about 100 dairy farms that distribute their milk directly to the consumer. These farms are among the largest dairy establishments in the milkshed and have a combined production estimated at 400,000 pounds daily. Until a few months ago, practically all this milk delivered by the producer directly to the consumer was sold as "certified" milk, that is, milk that met the standards in the regulations as to quality and handling, but that was not pasteurized. Since the publication in February 1951 of the new regulations which require the pasteurization after December 8, 1951 of all milk distributed in the Federal District, many of these larger producers have installed pasteurizing plants and the milk now distributed by them is both certified and pasteurized. Home delivery of the bottled milk is made by truck.

In addition, there are approximately 450,000 pounds of milk per day which are turned over by the producer to the pasteurizing plants or to a middleman who in turn delivers the milk to the plants for pasteurization. Most of the milk pasteurized at these central plants is sold by the producer to the plants and distributed by the latter. In some cases, the producer pays a fee for the pasteurization and handles the distribution. The pasteurizing plants deliver the milk in bottles or cardboard containers to the consumer's home or to super markets or the better stores having refrigeration.

The remaining 200,000 pounds of the total daily consumption of about 1 million pounds, represent the milk supplied by the very small producers. This milk is generally sold by the producer to the "introducer" or middleman who sells it to the milk depots in Mexico City. It is sold raw from large open cans and poured from these cans to containers brought by the individual consumer to the store. Most of this milk comes from unregistered or "clandestine" producers who are not complying with the official milk regulations. Authorities of the Ministry of Health are well aware of this situation but feel that in view of the shortage of milk in the city, they should not take drastic steps to prevent the sale of milk by this group of producers, particularly since it is the custom in most households in Mexico to boil the milk.

The custom of having the milk poured at the store into the consumer's container is so deep-rooted, that even bottled milk is often sold in this manner. Many milk stores in Mexico City will not release the bottles to their customers even upon payment of a deposit but insist that they bring their own containers. The milk is transferred at the store from the bottle to the customer's container.

2. Other cities

In the city of Guadalajara, it is estimated that only about 20 percent of the fluid milk sold is distributed by home deliveries. Such deliveries are made by truck. In the other larger centers of Mexico, the proportion of home-delivered milk is similar to that of Guadalajara, with a somewhat higher percentage for those cities where a larger proportion of the milk is pasteurized. Outside of these centers, milk is usually sold at milk depots through the system of dipping milk from a can into the consumer's container. Another system used in many of the smaller cities and towns is the delivery of milk to homes by truck, bicycle, cart or donkey in large cans, from which the milk is poured into the receptacle furnished by the consumer.

D. Costs of production

There has been a steady rise in the cost of producing milk in Mexico during the past few years. The upward trend has included not only the cost of feed, the principal item in total costs, but also wages and the price of cattle. As an indication of the increase in feed costs, the average wholesale price in Mexico City of some of the most common feeds is given below for the first 7 months of 1951 compared with the same period of the two previous years:

	<u>Jan.-July 1949</u>	<u>Jan.-July 1950</u>	<u>Jan.-July 1951</u>
	<u>Dollars per S. Ton</u>	<u>Dollars per S. Ton</u>	<u>Dollars per S. Ton</u>
Alfalfa hay	28	25	29
Corn fodder	13	14	15
Wheat bran	32	29	37
Sesame cake	36	42	50
Cottonseed meat	40	36	43
Barley, feed	29	34	49

The price of dairy cows has likewise risen steadily during the past few years. Whereas in 1949 a low-grade cow could be purchased for from 63-76 dollars, the same type of cow at the present time would cost from 100-140 dollars. A high-grade dairy cow, which cost from 126-189 dollars in 1949, is now worth from 230-350 dollars. Registered Holstein heifers imported from the United States or Canada cost over 575 dollars delivered in Mexico City. Purebred bulls generally sell for from \$1,150 to \$2,300.

Recent studies of costs of production in 23 dairies within the Mexico City milkshed made by the Asociacion Nacional de Productores de Leche Pura (National Association of Producers of Pure Milk) show a range in costs per 100 pounds at the dairy of from \$3.11 to \$6.97, with an average of \$4.98. The daily production, number of cows, production per cow, and total investment per dairy, as well as the feed costs in these 23 dairies were found to be as follows:

	<u>Range</u>	<u>Average</u>
Production per day (pounds)	227 to 12,532	4,005
Number of cows	18 to 690	217
Production per cow (pounds)	12.7 to 28.6	18.4
Total investment, including cattle, buildings, and equipment (dollars)	1,618 to 186,347	60,603
Cost of feeding a cow in production (cents)	31 to 78	57

An estimate of the average cost of production of milk in the Federal District, based on information obtained from officials of the association of dairymen in the Mexico City milkshed (Sindicato de Ganaderos de Mexico), from the Livestock Division of the Ministry of Agriculture and Animal Industry, from the Milk Department of the Ministry of Health, and from individual dairymen is given below. It is based on costs for a dairy of 100 cows, of which 80 are considered to be in production, with an average total output of 1,813 pounds per day.

	<u>Cost per</u> <u>Quart</u> <u>Cents</u>
Total feed	5.59
<u>Beeding</u>	0.14
Total labor	0.99
<u>Herd Depreciation</u>	1.19

	Cost per <u>Quart</u> <u>Cents</u>
<u>Interest:</u>	.55
<u>Buildings:</u>	.14
<u>Other Expenses:</u>	.19
<u>Credits:</u>	
Calves and manure	.38
Total cost of milk at dairy	8.41

The cost of feed in the above estimate is based on the market price and not on the cost of production. It will be noticed that it represents a very high proportion of the total cost, nearly two-thirds. Since many of the producers grow at least part of their feed requirements, their actual feed costs are lower than appearing in the estimate given above. However, under such circumstances part of their profit for the selling of milk is actually a profit on the feed. The close proximity to Mexico City of many of the producers in the milkshed, makes the cost of feed unduly high because of the scarcity and high price of available land. This has been accentuated in recent years by the rapid growth of Mexico City, particularly of the industrial section to the north which is now encroaching upon what a few years ago were alfalfa fields. This situation has led the authorities concerned with milk production to encourage the movement of the dairy industry away from the Federal District. The areas now considered as the most suitable for the expansion of the milkshed are the Queretaro-Guanajuato district, the Toluca Valley of the state of Mexico, the state of Puebla, and the state of Hidalgo. A government-sponsored program for promoting the production of milk in these areas is discussed in the next section.

Costs of milk production in the Queretaro-Guanajuato district are discussed in a study recently published on the dairy industry in the Municipality of Apaseo, located in the state of Guanajuato and along the border of the state of Queretaro. 8/ The costs of production given for that area are in striking contrast with those shown above for the Federal District.

In the study mentioned above, this total daily cost is divided by an average daily production of 23 pounds per cow, giving a cost per quart of 4.3 cents. It is possible, however, that such costs are based on the situation at the leading dairy establishment of the Apaseo area, which is

8/ "Contribucion al Estudio de la Industria Lechera en el Municipio de Apaseo, Estado de Guanajuato" by Dr. Guillermo Cabrera Munoz Lodo, 1950.

one of the most efficiently operated in the country, and not on average condition for the area. Assuming a daily production of only 18 pounds per cow, which would probably be closer to the average, the cost would be 5.4 cents per quart. This compares with an average cost in the Federal District of 8.4 cents per quart, as shown above. Production costs in Apaseo seem to be therefore, 40 percent lower than in the Federal District. Furthermore, the availability of land in the Queretaro-Guanajuato district makes possible an expansion of the dairy industry there which could not take place in the Federal District and other areas close to Mexico City where milk production is now centered.

E. Program for expansion of production

The Federal Government of Mexico is sponsoring a program through Nacional Financiera, the government investment institution, for the expansion of milk production to supply Mexico City. The goal of this program is to raise the supply of fluid milk for the city from its present level of about 1.1 million pounds up to 3.4 million pounds per day. The areas where it is planned to promote an expansion of the dairy industry include the Queretaro-Guanajuato district, the Toluca Valley of the state of Mexico, the states of Puebla and Hidalgo, and possibly the Cuetla district of the state of Morelos. It is hoped to extend the milkshed eventually to include an area within a radius of about 200 miles from Mexico City. The means by which Nacional Financiera plans to carry out this program are technical guidance and the extension of credit for the purchase of cattle and transportation equipment and for the building of concentration and pasteurization plants.

As a first step in this program Nacional Financiera has announced a loan of \$1,156,000 to dairymen in the Queretaro-Guanajuato district. A group of 118 milk producers in the district are being organized into an association called Industrias Ganadera y Lechera Queretana, S. A. The loan will be extended through this association which will direct the program of expansion of production and will establish facilities for treating and marketing the milk. Of the total amount involved, \$924,300 will be used for the purchase of dairy cattle in the United States and in Canada. The other \$231,200 will be devoted to the establishment of concentration and pasteurization plants and to the purchase of trucks for transporting the product. It is planned to establish three concentration plants at the following location: (1) the Apaseo-Colaya area; (2) Queretaro; and (3) San Juan del Rio. The milk will be collected and cooled at these plants and shipped to Mexico City by truck. For this purpose it is planned to purchase a fleet of trucks equipped with insulated stainless steel tanks. Transportation from the concentration plants to Mexico City will take an average of four hours and it is expected that the milk will retain a temperature not exceeding 40 degrees Fahrenheit. The project includes the building of a plant in Mexico City to receive, pasteurize, and bottle the milk and from where it will be distributed throughout the city.

A study is now being made by Nacional Financiera of conditions in other areas to determine their suitability for a similar program. It is reported that milk producers in the state of Puebla have already applied for a loan and have submitted a project for the development of the industry in their district.

II. Processed Milk

There are two large firms in Mexico processing milk. One of these has two plants in the state of Jalisco, located at Ocotlan and at Lagos de Moreno respectively. This firm produces condensed, evaporated, and powdered milk. The other firm produces evaporated milk exclusively and its plant is located near the city of Queretaro. These three plants are the only ones in the country producing evaporated milk. The Jalisco plants are the only ones producing condensed milk or powdered milk for household consumption.

These plants collect milk within a radius of about 62 miles. They have established milk stations in this area where milk is collected, cooled, and shipped to the plants. The average price being paid by these plants is \$3.05 per 100 pounds for fluid milk at the dairy.

As far as powdered milk for industrial consumption is concerned, there are four manufacturers in Mexico at the present time, one located in Mexico City, one in Jalisco, one in Queretaro, and one in Tlaxcala. Their combined production is estimated at about 550 tons a year. Two of these plants use spray process and the other two use roller. It is expected that some expansion in the output of this product will take place in 1952. A new plant being built in Mexico City for the manufacture of a variety of dairy products will have a capacity for 1,100 pounds per day of powdered milk or about 200 tons per year. ^{9/} Furthermore, it is reported that two milk pasteurizing plants recently inaugurated, one at Guadalajara and another at Torreon, are planning to install equipment for making powdered milk in order to utilize the surplus milk now being received by them.

III. Butter

A. Factory production

There are at present about 35 creameries making butter in Mexico. Of these, 12 are located in Mexico City, 6 in Monterrey, and 5 in Guadalajara. The total output of factory butter during 1950 is estimated at approximately 7 million pounds, of which nearly half was produced in Mexico City, one fourth in Monterrey and Guadalajara combined, and the remainder largely in Toluca, Hermosillo, Puebla, Queretaro, and Cuauhtemoc.

^{9/} Further information on this new plant is included in the section on expansion of the butter industry.

The location of the creameries and the quantities of butter produced by them during 1950 were approximately as follows:

<u>State and Locality</u>	<u>Number of Plants</u>	<u>1950 Production</u> <u>1,000 lbs.</u>
Baja California - Mexicali	2	66
Chihuahua - Cuauhtemoc	2	154
Coahuila - Torreon	1	110
Federal District - Mexico City	12	3,219
Jalisco - Guadalajara	5	695
Mexico - Toluca	2	573
Nuevo Leon - Monterrey	6	1,113
Puebla - Puebla	1	243
Queretaro - Queretaro	1	165
Sonora - Hermosillo	1	265
Tamaulipas - Tampico	<u>1</u>	<u>11</u>
Total	35	6,614

Source: Based on information obtained from the trade and from Consular officers in Mexico. Estimate of production for Mexico City is based on arrivals of cream for butter production as reported by the trade. There are no recent official statistics on butter production in the country.

Of the total production of butter in Mexico City, approximately three-fourths represents the output of the two leading creameries in the city. The remaining fourth is produced by ten other small creameries. Practically all the butter produced in the city is manufactured from cream brought from outside of the Mexico City milkshed. The high price of milk in Mexico City precludes the use of milk produced within the milkshed in the manufacture of butter. The bulk of the cream is received from northern states, principally Nuevo Leon, Coahuila, Durango, and Zacatecas. Cream is brought into Mexico City from as far north as Piedras Negras, on the United States border. The cream received from these northern states is almost entirely from goat's milk. Some quantities are also received from the Jalisco-Michoacan region, consisting chiefly of cow's cream. It is estimated that of the total quantity of butter produced in Mexico City about 60 percent is from goat's cream and 40 percent from cow's cream.

The cream is separated at local stations and shipped to Mexico City by rail. The skimmed milk is used locally for the production of cheese. Shipment of the cream is made in unrefrigerated cars and transportation from place of origin to Mexico City takes an average of about 48 hours. The cream therefore reaches Mexico City in a highly acid condition. The acidity is usually removed through the use of neutralizers approved by the Ministry of Health.

Cream for butter production is usually bought on the basis of the butterfat content. The current price is about 39 cents per pound for cream from northern states, chiefly goat's cream, and 53 cents for cream from the Jalisco-Michoacan district, which is cow's cream.

B. Total output

In addition to the factory production mentioned above, about 4,409,000 pounds of butter were produced on farms in 1950. This gives a total butter production of about 11,023,000 pounds for the country during 1950.

Farm production of butter is centered largely in the northern states of Chihuahua and Coahuila, in the Jalisco-Michoacan region, and in the state of Mexico. Production in the north is almost entirely from goat's cream. This butter is sold in bulk and usually in very small lots. In many cases, a farmer may send 77 to 120 pounds to the Merced market in Mexico City for sale. This farm-produced butter is generally unpasteurized.

The total quantity sold as butter is actually much larger than the above figures would indicate, due to the prevailing practice of adulterating butter with vegetable fats. The adding of vegetable fats is practiced principally in Mexico City, where the price of cream is higher than in other producing districts. Estimates of the percent of adulteration in Mexico City vary from 25 to 60 percent of the total volume sold as butter.

Of the total output of butter in Mexico, it is estimated that about 60 percent is sold packaged, in one pound or 2.2 pound packages. The remainder is sold in blocks of from 12 to 88 pounds, either to bakeries or for sale to the public at retail establishments.

In addition to the margarine used to adulterate butter, there is some production of margarine which is sold as such. At the present time two firms are producing and selling margarine in Mexico, one located in Monterrey and the other in Mexico City. This product which is sold as margarine is considered to be of good quality and to meet the requirements of the regulations, such as: the addition of vitamins A and B, a minimum of 80 percent of fat, and a maximum of 16 percent of moisture. Much of the margarine is sold at retail in one pound blocks wrapped in waxed paper, with or without a cardboard container. Large quantities are also sold to bakeries in 44 to 55 pound blocks.

C. Consumption

Per capita consumption of butter in Mexico is extremely low. A total production of 11,023,000 pounds per year would be equivalent to about four-tenths of a pound. This compares with an annual consumption in the United States of over ten pounds per capita. Outside of Mexico City and a few of the larger towns, butter consumption in Mexico is negligible. It is estimated that from two-thirds to three-fourths of the total production is consumed in Mexico City. Assuming the latter proportion, per capita consumption in Mexico City would be about 2.7 pounds per year.

Although the use of butter and butter substitutes is steadily increasing in Mexico, such products cannot yet be considered as part of the diet of the average Mexican. This is due partly to the high cost of butter in relation to other foods and to average income and partly to dietary habits. It is customary in Mexico, even in the larger cities, for the bulk of the population to eat tortillas instead of bread, at least at the principal daily meal. This precludes the use of butter. Furthermore, even when bread is used, it is not likely to be accompanied by butter. Butter consumption in Mexico is definitely limited to the higher income groups.

D. Expansion of industry

A new creamery is now being built in Mexico City which will materially expand production capacity in the city. This new plant, which it is expected to inaugurate by the middle of 1952, will have sufficient capacity for the following daily output: 13,200 pounds of butter; 17,600 pounds of margarine; 5,500 pounds of process cheese; 2,200 pounds of Philadelphia-type cream cheese; 1,100 pounds of mayonnaise; and 1,100 pounds of powdered milk. The creamery is equipped with machinery of United States manufacture, except for the butter and margarine packers which were imported from Switzerland. It is planned to have an American technician supervise the installation of the equipment. The importance of this new creamery in the Mexican butter industry will be realized by noting that its capacity exceeds total present production in Mexico City and is equivalent to over two-thirds of the total output of creamery butter in the country. The chief difficulty encountered will be the shortage of milk and cream for processing. The owner of the plant hopes, however, that the increased demand for the product will encourage an expansion in production which will enable him eventually to utilize the new plant to its full capacity.

IV. Cheese

A. Factory production

The leading district in the commercial production of cheese in Mexico is Cuauhtemoc, in the state of Chihuahua. The Mennonite farmers who settled in that district in the early twenties started the manufacture of Cheddar-type cheese in Mexico soon after their arrival. There are now 12 plants in the neighborhood of Cuauhtemoc with a total production of about

2,200,000 pounds per year of Cheddar and Daisy style cheese. Much of this production is shipped to Mexico City where it is used for direct consumption or in the preparation of process cheese. Cheddar cheese is also produced by the Mennonites at Estacion Patos in the state of Durango. Production there is estimated at about 220,000 pounds per year.

Second in importance to Chihuahua as a commercial cheese producer is the District of Monterrey, Nuevo Leon. There are four plants in Monterrey producing approximately 950,000 pounds of cheese per year. This is mostly cheese made from skimmed milk, both goat's and cow's, but small quantities of Cheddar cheese are also made.

Mexico City ranks third with a production of 805,000 pounds of cheese per year, the output of three small plants. This production consists entirely of process cheese. The ingredients used are chiefly Cheddar cheese from Chihuahua and queso anejo, a skimmed-milk cheese made principally in the state of Jalisco. The bulk of the process cheese produced is prepared in brick form and packaged in three weights: 1.1, 2.2, and 4.4 pounds. Some quantities are also prepared in ball shape with a red paraffin coat.

Other centers where cheese factories are located include Guadalajara, Mexicali, and Torreon. Based on information received from trade sources in Mexico City and from Consular officers throughout the country, the Embassy estimates the total production of cheese during 1950 by the 30 factories in the country at about 5,600,000 pounds. The location and approximate output of these factories in 1950 is reported as follows:

<u>State and Locality</u>	<u>Number of Plants</u>	<u>1950 Production</u> <u>1,000 lbs.</u>
Baja California - Mexicali	2	243
Chihuahua		
Cuauhtemoc	12	2,227
Chihuahua	1	441
Coahuila - Torreon	1	220
Durango - Estacion Patos	1	220
Federal District - Mexico City	3	805
Jalisco - Guadalajara	5	507
Nuevo Leon - Monterrey	4	948
Tamaulipas - Tampico	<u>1</u>	<u>4</u>
<u>Total</u>	<u>30</u>	<u>5,615</u>

As mentioned in the section on the expansion of the butter industry, a new plant is now being built in Mexico City which will have a daily capacity for 5,500 pounds of process cheese and 2,200 pounds of Philadelphia-type cream cheese. As will be noted from the above table, the capacity of this new plant is equivalent to two and a half times present production in Mexico City and more than one-third the total output of cheese in commercial plants in Mexico at the present time.

B. Farm production

There is some production and consumption of cheese in almost every district of Mexico where milk is produced. The proportion utilized for this purpose is of course larger in areas where the lack of transportation facilities makes it difficult to market fresh milk. There are no statistics on the production of cheese on farms in Mexico since the 1940 Census. Production at that time was reported as 24,400 pounds, the bulk of which originated in the northern states of Zacatecas, San Luis Potosi, and Chihuahua, and in the Jalisco-Michoacan region. The types of cheese made vary with the regions. The following are among the most important:

1. Queso anejo or aged cheese. This cheese is made from skimmed milk and cured for from 6 to 8 months. It is prepared in round forms, the individual cheese weighing from 11 to 22 pounds, and packed in jute bags containing 6 or 8 cheeses. It is white, quite dry, and has a crumbly texture. This cheese is used widely in Mexico for serving with enchiladas and other native dishes. Sometimes, it is covered with red chile powder by the wholesalers in Mexico City, probably to give it a better appearance. It is then called queso enchilado. It is made largely on farms in the state of Jalisco and to some extent also in the states of Michoacan and Mexico. A large proportion of the total production is shipped to the Merced market in Mexico City from where it is distributed throughout the Federal District and adjacent areas. Daily consumption of this type of cheese in Mexico City is estimated at 2,200 pounds per day, or about 805,000 pounds a year. Part of this quantity is used in making process cheese, as mentioned above.

Queso anejo is by far the most important of the typical farm cheeses of Mexico. The volume produced is larger than that of any other type, including factory-made cheeses.

2. Queso fresco or fresh cheese. This cheese is also made from skimmed milk, either cow's or goat's. It is usually made in areas supplying Mexico City with cream for butter production, out of the resulting skimmed milk. This cheese is sold fresh, within a few days after it is made, and while it is still quite moist. It is made in many regions of Mexico, but chiefly in the north, particularly in Coahuila and Nuevo Leon, where it is prepared mainly from goat's milk, and in Michoacan and Jalisco, where it is made usually from cow's milk. In the north it is often packed into cans of 40 pounds each.

3. Queso bola de Chiapas. This is a ball-shaped cheese, yellow in color, and similar to Edam but without the red paraffin coat. It is made from whole milk and ripened for about three months. It is typical of the state of Chiapas.

4. Asadero or Oaxaca cheese. This cheese is typical of Oaxaca but is now made largely in the state of Jalisco. It is called asadero (Tit for roasting") because it melts easily when heated. Asadero cheese is made from whole milk and is white in color. In making it the curd is heated and, while hot, it is cut and braided into small loaves of from $\frac{1}{2}$ to 11 pounds in weight.

5. Panela. This is a fresh cheese made from whole or partially skimmed milk. The curd is pressed into small square molds. The squares usually weight about $\frac{1}{2}$ pound. This type of cheese is made in many regions of Mexico.

V. Ice cream

The production of ice cream in Mexico is centered largely in Mexico City. During 1950, Mexico City production is estimated at about 3,000 gallons daily, or a total annual output of 1.1 million gallons. An increase of about 20 percent is believed to have taken place during 1951, thus bringing annual production to 1.3 million gallons. It is difficult to estimate production outside of the city in view of the many small producers scattered throughout the country, but the most reliable sources report a total production for 1950 of about 2.3 million gallons, and an increase to 2.8 million gallons in 1951.

The size of the plants is generally very small. It is reported that there are only seven manufacturers in the country with an output exceeding 250 gallons a day. Of these, five are located in Mexico City and two in Monterrey. The daily output of the largest plant is in the neighborhood of 500 gallons.

The bulk of the product sold as ice cream in Mexico contains little or no butterfat. It is made largely from nonfat dry milk solids with the addition of vegetable fats. It is estimated that from 75 to 80 percent of the total fat content of the ice cream produced in Mexico City is of vegetable origin. Trade sources claim that the use of cream instead of vegetable fat would require a doubling of present prices for ice cream.

Most of the large ice cream manufacturers in Mexico City buy their mix from one of the large pasteurizing plants in the city. A few years ago there was some importation of ice cream mix from the United States but this practice has been discontinued because of the high cost involved. The mix locally is made from imported nonfat dry milk solids and domestically-produced coconut or cottonseed oil, with the addition, in some cases, or a small proportion of butterfat.

The average fat content of ice cream produced in Mexico City is 10 percent, although in some instances it is as low as 6 percent. In the best grades, it may run as high as 14 percent. Approximately 75 percent of the quantity produced in Mexico City is pasteurized. For the rest of the country, this proportion is believed to be considerably lower, but there is no reliable estimate.

The flavorings used are generally the same as those employed in the United States. About 60 percent of the total consists of vanilla, and the remainder largely of chocolate, strawberry, and nut.

The ice cream produced in Mexico City is distributed not only within the city but also throughout a wide area of the country. The principal markets outside of the city are the towns to the south, such as Cuernavaca, Taxco, and Acapulco. Also important are consumption centers located to the east of Mexico City, principally Puebla, Orizaba, Cordoba, and Veracruz.

PRICES

An increase in official prices for milk in the Federal District of from 25 to 30 percent 10/ took place on February 10, 1952. The increase was established by an announcement signed by the Director General of Prices of the Ministry of Economy and published in the Diario Oficial of February 9, 1952. The new prices are as follows:

Cents per quart

For certified and pasteurized milk, second grade:

To the public, at stores	13.1
To the public, home-delivered	14.2

For pasteurized milk, third grade:

To the public, at stores	11.5
To the public, home-delivered	12.6

No official price has been established for certified and pasteurized milk of first grade. Producers are free to sell this grade of milk at any price. Current prices for this grade range from 16.4 to 20.8 cents per quart, with the bulk selling for from 16.4 to 17.5 cents per quart.

Prices of fresh milk throughout the country were frozen by the decree of January 4, 1951, freezing the prices of a number of articles considered as basic necessities. Since then, producers in many districts have requested an increase in the official prices from the Direccion General de Precios of the Ministry of Economy. In view of the increase in costs of production, the Direccion has granted many of these requests.

10/ The official prices previously in force were established by a decree dated February 9, 1951, published in the Diario Oficial of February 13, 1951, and effective the day following publication.

There are fifteen dairies supplying milk to Mexico City which have been granted an exemption from these regulations and are therefore authorized to set their price freely. These fifteen dairies are considered to be among the most important in the milkshed. Their current prices range from 10.9 to 16.4 cents per quart, home-delivered.

Reconstituted milk prepared from nonfat dry milk solids and added vegetable fats sells for 9.3 cents at stores and 9.8 cents home-delivered, when distributed commercially. In an effort to hold the price of milk down, the Government instituted a program a year ago through Compania Exportadora e Importadora Mexicana, S. A. (CEIMSA), the semi-governmental agency in charge of regulating supplies of basic foodstuffs, of distributing reconstituted milk at a price of 6 cents per quart. The milk is sold at the 220 stores which CEIMSA operates in Mexico City. At the present time a total of 17,000 quarts are sold daily. This program actually involves the subsidizing of milk consumption since CEIMSA buys at 6.5 cents and therefore loses 0.5 cents per quart of milk sold.

The retail price of milk in terms of Mexican currency has risen sharply in Mexico City during the past decade. In 1942 the average retail price was only .34 centavos per liter. By 1946 it had doubled, and in 1951, the price was 93 centavos, or nearly three times the 1942 level. 11/

Processed milk

Prices for condensed, evaporated and powdered milk were frozen as of January 4, 1951, by a decree freezing the prices throughout the country of a number of articles considered as basic necessities. 12/ The decree provides that the Ministry of Economy may authorize an increase in price at the request of the producer or dealer provided the latter submits evidence justifying such an increase. Based on this provision, an increase was granted for the three types of processed milk mentioned above effective June 1, 1951. The prices now authorized for the domestic production of these commodities are as follows:

	<u>Wholesale</u> <u>Dollars per Case</u>	<u>Retail</u> <u>Cents per Can</u>
Condensed milk:		
Cases of 48 cans of 14 $\frac{1}{2}$ ozs. each	8.41	18.5
Evaporated milk:		
Cases of 48 cans of 15 ozs. each	6.65	15.0
Cases of 48 cans of 6 ozs. each	3.53	8.1
Cases of 96 cans of 6 ozs. each	6.76	8.1

11/ Appendix Table 11 gives the average price in Mexico City by years from 1940 through 1951.

12/ Decree dated January 2, 1951, published in the Diario Oficial of January 4, 1951, and effective on the date of publication.

	<u>Wholesale</u> <u>Dollars per Case</u>	<u>Retail</u> <u>Cents per Can</u>
Powdered whole milk:		
Cases of 24 cans of 16 ozs. each	12.21	54.9
Cases of 6 cans of 5 pounds each	14.39	254.3

These prices represent an increase of about 4 percent over the prices prevailing on January 4, 1951.

The prices authorized for imported powdered milk are higher than those appearing above and vary according to the prices prevailing for the different brands when the decree became effective. On the average, wholesale prices for imported powdered milk are about 28 cents per pound higher than those appearing above for milk of domestic production. The retail price of the five-pound can of imported whole powdered milk is about \$4.00, compared with a price of \$2.54 for the domestic product, as shown above.

Other dairy products

There are no official prices for cheese, butter, ice cream or other dairy products in Mexico. A steady upward trend is shown in the price of fresh cheese in Mexico City from 1942, when the average wholesale price was 10.0 cents per pound, to a peak of 27.4 cents in 1949. Since then the price has declined to 21.0 cents for 1951. On the other hand, the price for aged cheese has continued upward to the present time. From 15.5 cents per pound in 1942, the average wholesale price in Mexico City for this type of cheese has risen to 34.8 cents for 1951. ^{13/} The wholesale price in Mexico City for domestically-produced Cheddar or process cheese is about 39.4 cents per pound. Process cheese imported from the United States is being sold by the importer to the retailer at \$20.80 for 6 loaves of 5 pounds each, or 69.4 cents per pound.

In towns where Consular Posts are located, wholesale prices for fresh cheese ranged during the first half of 1951 from 18.4 to 42.0 cents per pound. The range in prices for aged cheese was from 26.2 to 52.4 cents per pound, while American-type cheese prices varied from 40.6 to 57.7 cents per pound. In 1950 the wholesale price for fresh cheese in such towns ranged from 15.7 to 36.7; that for aged cheese from 21.0 to 52.4; and for American-type cheese from 34.1 to 62.9 cents per pound.

Wholesale butter prices have also risen steadily during the past ten years. In Mexico City these prices have increased from 23.0 cents per pound in 1942 to 38.3 in 1951. ^{14/} These prices refer to butter adulterated with

^{13/} Appendix Table 11 gives average wholesale prices in Mexico City for cheese and butter from 1940 through 1951.

^{14/} IBID

vegetable fats, which comprises the bulk of the available supply. Pure butter of domestic production sells for 52.4 to 63.0 cents per pound wholesale. In towns where Consular posts are located, the average wholesale price for butter was 39.4 cents per pound in January 1951, compared with 32.9 for the same month of 1950 and 34.0 for January 1946. The current wholesale price of margarine in Mexico City ranges from 28.8 to 38.0 cents per pound.

Wholesale prices for ice cream in Mexico City during the first half of 1951 ranged from 27.5 to 32.8 cents per quart. The retail price varied from 43.8 to 54.7 cents per quart.

FOREIGN TRADE

Value and quantity of trade - 1950

Mexico is a net importer of dairy products. During 1950 total imports of all such products amounted to \$2,295,492 compared with exports of \$1,191. Imports of dairy products that year were fifth in order of importance among agricultural imports into Mexico, being exceeded in value only by wheat, wool, rubber and lard. The principal item in the dairy group is powdered milk, imports of which in 1950 amounted to \$1,814,431. Next in importance was cheese, with a value of \$391,212. Other dairy imports in the order of their value, were butter, evaporated milk, fresh milk (for consumption in border communities), and condensed milk.

Quantities of dairy products imported into Mexico during 1950, were as follows: powdered milk, in containers up to 11 pounds, 2,730,000 pounds; powdered milk, in containers over 11 pounds, 6,695,000 pounds; cheese, Cheddar, 289,000 pounds; cheese, other, 646,000 pounds; butter, 99,000 pounds; evaporated milk, 146,000 pounds; fresh milk, 49,000 pounds; and condensed milk, 2,000 pounds. ^{15/} Exports amounted to only about 2,000 pounds of processed milk and smaller quantities of butter and cheese.

The United States was the source of 76 percent of Mexico's imports of all products during 1950. It furnished almost all of the powdered milk in containers up to 11 pounds, 95 percent of the quantity in containers of over 11 pounds, and practically all of the evaporated, fresh, and condensed milk imported. In the case of cheese and butter, imports from European countries exceeded those from the United States. While the latter supplied all of the Cheddar cheese imported in 1950, it was the source of only one-fifth of the arrivals of other types of cheese. The Netherlands was the leading supplier of cheese other than Cheddar. In terms of quantity, the United States occupied the second place in this group, followed by Switzerland, Argentina, Denmark, Italy, Finland, and France. About 67 percent of the total quantity of butter imported originated in Denmark, the United States supplying 29 percent, and small quantities coming from Argentina and other countries.

^{15/} Appendix Tables 3 to 10 show quantity and value of imports of dairy products into Mexico, by country of origin, from 1940 through 1951.

Value and quantity of trade - 1951

During 1951, the total value of dairy products imported into Mexico was \$2,982,000. Powdered milk continued to be the principal dairy product imported, and in 1951, totalled 12,621,000 pounds, the highest since 1947, when 13,100,000 pounds were imported. During the past five years, there has been a decline in imports of powdered milk in containers up to 11 pounds and a sharp increase in imports in larger containers.

Imports of powdered milk into Mexico were placed under import control by a decree dated January 3, 1952, and published in the Diario Oficial of January 10, 1952. Under the terms of this decree, all importations of powdered milk are subject to permit from the Ministry of Economy. In February, 1952, a Powdered Milk Committee was established by this Ministry and all applications for imports are referred to it for review. Applications for permits to import powdered milk must be accompanied by a statement giving the distribution to be made of the milk to be imported.

There was no significant change in imports of other types of milk, such as evaporated milk and condensed milk, during the year. In the case of cheese, there was a shift away from Cheddar, which was imported principally from the United States, toward other types, arriving chiefly from the Netherlands and other European countries. Total cheese imports in 1951 amounted to 1,014,000 pounds, only slightly higher than in 1950. Imports of Cheddar cheese declined to a negligible level during the year, while those of other types increased by 55 percent.

Exports of dairy products from Mexico during the past decade were important only in 1946. In that year, the value of total dairy products exports amounted to \$123,000, and consisted almost entirely of cheese, most of which was shipped to the United States.

In 1951, exports of dairy products, although still relatively small, showed an increase over 1950. The value of exports during 1951 was approximately \$2,500, slightly above the preceding year, and as in previous years, they were limited to processed milk, cheese and butter.

The share of the United States in Mexico's import trade of dairy products during 1951 rose to 79 percent of the total value. The United States supplied practically all of the processed milk imported and all of the Cheddar cheese. Importations of powdered milk from Canada, which amounted to 1,523,000 pounds during 1950, dropped to only 500,000 pounds in 1951. Nearly half of the imports of cheese, other than Cheddar, during this period originated in the Netherlands, with the United States, Switzerland, Denmark, Argentina, Italy, and Finland following in that order. About two-thirds of the butter imported was shipped from Denmark and the remaining third largely from the United States.

Recent trends

While the total volume of dairy imports into Mexico has shown a decided upward trend during the past decade, there have been important shifts among the various products imported. These shifts have been in response partly to supply conditions in exporting countries but mainly to changes in consumers' preferences and to developments in the domestic dairy industry. Up to 1940, cheese had been the most important dairy import into Mexico from the point of view of value. In 1941, powdered milk assumed the first place among dairy imports and has maintained it up to the present time. Imports of this commodity that year amounted to 741,000 pounds. In 1951, they amounted to 13 million pounds and represented 82 percent of the total value of all dairy imports. Arrivals of evaporated milk from abroad rose parallel with those of powdered milk up to a peak of 6 million pounds in 1945, but have declined sharply since then. During 1951, only 115,000 pounds of evaporated milk were imported. In the case of condensed milk, the decline in imports took place during the late thirties. At the present time, the quantity imported of this commodity is negligible.

The large increase in imports of powdered milk is explained largely by the increase in population particularly of urban population, which comprises the great majority of the milk consumers of the country. Production of milk within the country has not kept pace with the rapid rise in the number of inhabitants and has therefore had to be supplemented by an increasing volume of imports. Furthermore, the rise in standards of living, has resulted in a higher per capita consumption of milk and in an expansion of the candy and bakery industries which are users of powdered milk.

Reconstituted powdered milk has been used during the past few years to supplement the milk supply of Mexico City and other large centers of population. The practice of selling reconstituted milk was started in Mexico City in 1947 at a time when the milk supply was low as a result of the spread of foot-and-mouth disease to the milkshed. At the present time, sales of reconstituted milk in Mexico City amount to nearly 150,000 pounds per day. Furthermore, it is reported that large quantities are being used in Mexico City as well as in many of the other larger cities, to adulterate fresh milk. This practice has led to campaigns on the part of some dairymen to induce authorities to restrict imports of powdered milk or to supervise the use of the product in order to make certain that it will not be reconstituted and sold as "fresh" milk. In some instances, these efforts have been directed also against reconstituted milk labeled as such. One instance of this was a recent article on the front page of a Mexico City newspaper under the headline "Polio in Rehydrated Milk." It stated that a group of physicians of the Federal District considered rehydrated milk as a dangerous food because it contains "microscopic fungi" which lodge in the spinal cord and the bones and may provoke polio. 16/ Regulations for reconstituted milk are now being considered by the Ministry of Health.

16/ Ultimas Noticias, June 19, 1951.

The decline in imports of condensed and evaporated milk is the result largely of the substitution of domestically-produced canned milk for the imported product. The bulk of the consumption of these two types of milk is now supplied by the local plants. In the case of powdered milk, on the other hand, the country still depends on imports for nearly 80 percent of its requirements.

Cheese imports declined sharply during the war years as a result chiefly of the closing of European sources of supply. From a prewar average of about 968,000 pounds per year, these imports dropped to a low of 223,000 pounds in 1943. During the five years (1946-1950) cheese imports averaged 900,000 pounds, close to the prewar level. Arrivals from abroad during 1951 were 1,014,000 pounds.

Regulations for the importation of dairy products

The registration with the Ministry of Health and Welfare of all foods and beverages packed in containers and of some sold in bulk is required by Article 192 of the Sanitary Code of Mexico (Código Sanitario de los Estados Unidos Mexicanos) for all such imports into the country. 17/ The requirements for registration are contained in the "Regulations for the Registration for Foods, Beverages and Similar Products" (Reglamento para el Registro de Comestibles, Bebidas y Similares) issued in 1941 and amended in 1944. 18/

According to these regulations, the following steps must be taken to register food products in Mexico:

1. The exporter must appoint a representative in Mexico.

2. The representative must apply for the registration of the product to the Department for the Control of Foods and Beverages at the following address:

Departamento de Control de Alimentos y Bebidas
Secretaría de Salubridad y Asistencia
Paseo de la Reforma y Lieja
Mexico, D. F.

3. The application for registration must be accompanied by the following:

- (a) Letter appointing the representative.
- (b) A certificate from local authorities or a Chamber of Commerce, in the country of origin, stating that the sale of the product is freely permitted in that country. This certificate must be visaed by a Mexican Consul.
- (c) Chemical analysis of the milk.

17/ The Code is dated December 31, 1949, and was published on January 25, 1950 in the Diario Oficial, the official publication of the Mexican Government.

18/ Established by a decree dated February 20, 1941, and published in the Diario Oficial of March 5, 1941. These regulations were amended by a decree dated February 20, 1942, published in the Diario Oficial of March 11, 1942, and by a decree of March 17, 1944, published in the same periodical on April 20, 1944.

(d) Bacteriological analysis.

(e) Original labels and proposed labels in Spanish stating: name of product, name and address of manufacturer, the statement "producto norteamericano" (product of the United States), net weight in grams, the registration number with the Ministry in the following manner: Reg. S. S. A. No. _____ "A", and a statement indicating, in the case of powdered milk, whether it is whole, partially skimmed, or skimmed.

(f) The receipt for the payment of the registration fee.

Special requirements applying to milk and milk products are contained in Chapter VIII of the regulations. A translation of this Chapter is submitted herewith as Appendix B.

Import Duties

The duties in force on November 1, 1951 for the importation of dairy products into Mexico were as follows:

Fraction:	Product	Unit	Specific:	Ad :	Official
No.			Duty :	valorem:	Price 1/
			Pesos 2/	Duty :	Pesos
					Par kg.
1.22.10	Milk, fresh	Gross kg.	.05 plus	5%	2.20
1.22.11	Milk, condensed	Gross kg.	.10 plus	25%	7.45
1.22.12	Milk, evaporated	Gross kg.	.40 plus	25%	2.60
1.22.13	Milk, powdered or in tablets, the weight of which including immediate container does not exceed 5 kilos 4/	Legal kg.	.40 plus	25%	3.60
1.22.14	Milk, powdered or in tablets, the weight of which including immediate container is over 5 kilos 4/	Legal kg.	.40 plus	15%	5.70
1.22.15	Butter or any kind of its substitutes	Legal kg.	.60 plus	20%	13.80
1.22.16	Cheese of any kind	Legal kg.	.40 plus	25%	10.15

1/ Official price is basis for calculation of ad valorem duty.

2/ One peso was equal to 11.56 cents in 1951.

3/ One kilo is equal to 2.2046 pounds.

4/ A subsidy was granted to importers of milk in powdered or tablet form by an accord dated March 28, 1951, published in the Diario Oficial of April 11, 1951, and effective retroactively to March 15, 1951. This subsidy was in force until December 31, 1951, and amounted to 1.37 pesos per kilo in the case of fraction 1.22.13 and .39 peso in the case of fraction 1.22.14.

Imports of fresh milk into the Northern Territory of Lower California is subject to permit from the Ministry of Economy. 19/

GOVERNMENT REGULATION OF THE INDUSTRY

During the past few years there has been a marked improvement in the regulation of the dairy industry on the part of the Federal Government as well as of some state and municipal governments. In state capitals and many other of the larger centers there are regulations establishing standards for milk, controlling the handling and distribution of the product, and requiring the testing of cattle for tuberculosis and other diseases. Although these regulations are not always enforced either because of insufficient trained personnel or of lack of public support, there is undoubtedly a growing recognition of the importance of insuring the safety and quality of the milk supply.

Milk standards

The regulations now in force for the production, handling, and distribution of milk in the Federal District and in Federal Territories and Zones are dated February 2, 1951, were published in the Diario Oficial of February 8, 1951, and became effective in the Federal District thirty days after publication and in the Territories and Zones sixty days thereafter. 20/ The general standards for cow's milk established by these regulations are as follows:

1. Density at 15 degrees Centigrade, not less than 1.0290.
2. Index of refraction at 20 degrees Centigrade, not less than 37 nor more than 39 degrees (Lythgoe method).
3. Acidity (in lactic acid), not less than .14 or more than .17 percent.
4. Chlorides, not less than .11 or more than .15 percent (Volhard method).
5. Lactose, not less than 4.3 percent (Polarimetric or Fehling method).

The regulations establish three grades of milk authorized for sale in the Federal District: (1) certified and pasteurized, first grade; (2) certified and pasteurized, second grade and (3) pasteurized, third grade. The requirements for each of these three grades, in addition to the general standards mentioned above, are as follows:

19/ Accord of March 10, 1951, published in the Diario Oficial of March 12, 1951.

20/ An errata to these Regulations was published in the Diario Oficial of April 14, 1951. The area to which these Regulations apply includes the Federal District, where Mexico City is located, the three Federal Territories (Quintana Roo, Baja California Norte, and Baja California Sur), and islands and other areas under federal jurisdiction and not comprised with in the limits of the twenty-nine states.

1. For certified and pasteurized milk, first grade:
 - a. Contain at least 3.4 percent natural fat (Gerber method).
 - b. Contain no less than 8.4 nor more than 8.9 percent non-fat solids.
 - c. Not leave in the filter, before pasteurization sediment greater than corresponding to number 1 in the scale (Wizard method).
 - d. Before pasteurization, the logarithmic average of six samples taken during a month, should not exceed 100,000 colonies per cubic centimeter on agar plates, nor 100,000 leucocytes per cubic centimeter, by direct count.
 - e. It should be pasteurized and bottled immediately after milking, at the plant of the dairy where it was produced.
 - f. After pasteurization, it should contain not more than 30,000 colonies per cubic centimeter on agar plates.
 - g. After pasteurization, it should give negative results to the phosphate test.
 - h. After pasteurization, it should be kept at a temperature not exceeding 10 degrees Centigrade up to the time it is delivered to the consumer.
2. For certified and pasteurized milk, second grade:
 - a. Contain at least 3.2 percent natural fat (Gerber method).
 - b. Contain not less than 8.3 nor more than 8.9 percent non-fat solids.
 - c. Not leave in the filter, before pasteurization, sediment greater than corresponding to number 2 in the scale (Wizard method).
 - d. Before pasteurization, the logarithmic average of six samples taken during a month should not exceed 500,000 colonies per cubic centimeter on agar plates, nor 500,000 leucocytes per cubic centimeter by direct count.
 - e. It should be pasteurized and bottled immediately after milking, at the plant of the dairy where it was produced. In case the dairy does not have pasteurizing equipment, the milk should be filtered and cooled to 12 degrees Centigrade, placed in sterilized containers, and shipped to a public pasteurizing plant.

- f. After pasteurization, it should not contain more than 100,000 colonies per cubic centimeter on agar plates.
 - g. After pasteurization, it should show negative results to the phosphate test.
 - h. After pasteurization, it should be kept at a temperature not exceeding 12 degrees Centigrade up to the time it is delivered to the consumer.
3. For pasteurized milk, third grade:
- a. Contain at least 3.2 percent natural fat (Gerber method).
 - b. Contain not less than 8.2 nor more than 8.9 percent non-fat solids.
 - c. Not leave in the filter, before pasteurization, a sediment greater than corresponding to number 3 in the scale (Wizard method).
 - d. Before pasteurization, the logarithmic average of six samples taken during a month, should not exceed 1,000,000 colonies per cubic centimeter on agar plates nor 1,000,000 leucocytes, by direct count.
 - e. Be pasteurized in public plants authorized by the Ministry of Health.
 - f. After pasteurization, it should not contain more than 200,000 colonies per cubic centimeter on agar plates.
 - g. After pasteurization, it should show negative results to the phosphate test.
 - h. After pasteurization, it should be kept at a temperature not exceeding 12 degrees Centigrade, up to the time it is delivered to the customer.

As mentioned in the section on "Extent of Pasteurization" above, the requirement that all milk sold in the Federal District be pasteurized did not become effective at the same time as the other provisions of the new regulations. Transitory Article Four provides that for ten months after the date of publication of the regulations, or until December 8, 1951, the sale to the public of unpasteurized milk would be tolerated, provided it originates in dairies authorized to produce certified milk before the new regulation became effective and provided also that the licenses of such dairies have been revalidated by the Ministry of Health and Welfare.

Such dairies must comply also with the provisions for dairy establishments contained in the regulations issued on September 12, 1941, and otherwise revoked by the new regulations. The decree dated July 25, 1949, published in the Diario Oficial of August 2, 1949, regulating the production, transportation, pasteurization and sale of milk in the Federal District and in Federal Territories and Zones, was also revoked by the new regulations.

The regulations of February 1951 also contain provisions concerning the health of dairy workers, milking and handling of milk at dairies, processing of milk at pasteurizing plants, marketing, and minimum requirements for buildings and equipment for dairies, pasteurizing plants and concentration plants.

Outside of the Federal District, the establishment of official standards for milk is confined largely to the larger consuming centers such as Monterrey, Chihuahua, Hermosillo, Torreon, as well as several of the border towns such as Mexicali, Ciudad Juarez, Piedras Negras, and Tijuana. As mentioned above, a law providing that milk sold in Guadalajara be either certified or pasteurized and requiring the installation of refrigeration facilities at milk stores in the city was enacted some time ago but has not yet been enforced. In Monterrey, the regulations in force prohibit the sale of unpasteurized milk and also require that milk contain no more than 50,000 bacteria per cubic centimeter. All milk sold in the state of Nuevo Leon must comply with the regulations issued by the State Government in 1945. 21/ In February 1951, pasteurization became obligatory in Torreon. Similar laws were adopted in 1950 in Hermosillo and Piedras Negras. In August 1948, the State Legislature of Yucatan placed the production and sale of all milk under state government regulations. 22/ The law provides for the mandatory licensing of all milk producers and the official inspection of stables. It looks toward the establishment of pasteurizing plants and the eventual pasteurization of all milk sold in the state. Similar regulations governing the dairy industry were issued in the state of Campeche in November 1948. 23/ Improvements in the milk inspection system have also been reported in Veracruz where an active campaign against the adulteration of milk is being pursued. There are still no facilities for pasteurization in this city. A project for regulating the handling and marketing of milk there is now under consideration.

21/ "Reglamento sobre Produccion, Explotacion y Venta de Leche y sus Derivados en el Estado de Nuevo Leon," published in the Periodico Oficial of the Government of the state of Nuevo Leon, April 28, 1951.

22/ "Reglamento sobre Produccion, Tratamiento y Venta de Leche y sus Derivados en el Estado de Yucatan," published in the Diario Oficial of the Government of the state of Yucatan, August 10, 1948.

23/ "Reglamento sobre Produccion Tratamiento y Venta de Leche y sus Derivados en el Estado de Campeche," published in the Periodico Oficial of the Government of the state of Campeche, November 18, 1948.

Standards for other dairy products

The regulations now in force in the Federal District for the manufacture, storage, packing, transportation, and sale of cream, butter, oleomargarine, and cheese were published in the Diario Oficial of July 9, 1942. The regulations establish standards for each one of the products mentioned, provide for the licensing of creameries, and contain requirements for the buildings and equipment of such establishments and for the marketing of the products.

DAIRY ASSOCIATIONS

The dairy industry of Mexico is organized into a National Chamber of the Dairy Industry (Camara Nacional de la Industria de la Leche), established under the auspices of the Ministry of National Economy along the same lines as the National Chambers for other major industries in the country. These National Chambers are grouped into a Confederation of Industrial Chambers of Mexico. The National Chamber of the Dairy Industry includes not only milk producers but also persons engaged in other phases of the industry such as processing and pasteurizing. Closely allied to this Chamber is the Union of Cattlemen of Mexico (Sindicato de Canaderos de Mexico). This is an organization of dairymen in the Federal District established under the auspices of the Ministry of Labor. The chief purpose of this organization to represent milk producers in negotiations with labor unions.

In addition, there are associations of dairymen organized by states under the law of livestock associations, and under the auspices of the Ministry of Agriculture and animal industry, for the purpose of promoting the common interests of milk producers. These state associations are usually composed of a number of local associations organized by municipalities. Within the Mexico City milkshed there are two such associations. These are the Milk Producers of Puebla and Tlaxcala (Productores de Leche de Puebla y Tlaxcala) and the Union of Cattlemen of the State of Mexico (Union de Canaderos del Estado de Mexico). The latter comprises six local associations.

In the Federal District, there are three organizations of small-scale milk producers as follows: the National Association of Small-Scale Producers of Milk and Dairy Products (Asociacion Nacional de Pequenos Productores de Leche y sus Derivados); the Rural Syndical Union of Small-Scale Milk Producers of the Federal District (Union Sindical Campesina de Pequenos Productores de Leche del Distrito Federal); and the Union of Small-Scale Producers of Magdalena Contreras and Other Towns (Union de Pequenos de la Magdalena Contreras y Demas Pueblos). It is reported by the Milk Department of the Ministry of Health, that these three organizations include approximately 80 percent of the unregistered or "clandestine" milk producers in the Mexico City milkshed.

Another type of dairymen's association is represented by the newly established National Association of Producers of Pure Milk (Asociacion Nacional de Productores de Leche Pura). This is a private association organized in June 1950 and includes 37 producers supplying about one-third of the total volume of milk sold in Mexico City. The chief objective of the Association is "to promote, inspect and control the production, handling and sale of milk under conditions of absolute sanitation and strict purity, in order to prevent that this basic food may constitute a means of transmitting germs harmful to health." According to its Bylaws, the Association will accomplish this objective by engaging in the following activities:

1. Promote the production of pure milk by aiding its members to improve the sanitary conditions of barns and processing plants.
2. Promote the selection of sires and dams of high quality.
3. Establish laboratories for the analysis of the milk produced by the dairies owned by its members.
4. Certify and make public the quality of the product of each of its members, in accordance with the analyses made in the laboratories of the Association, and establish grades depending on butterfat content and on characteristics determining purity and lack of pathogenic bacteria.
5. Promote the consumption of pure milk and its sale under sanitary conditions.
6. Obtain from the authorities the permits necessary for the importation of selected cattle for the dairies owned by its members.
7. Take steps before federal, local or municipal authorities to bring about measures tending to insure the purity and quality of milk for the benefit of consumers.
8. Adopt standards for grading milk and regulations of commercial ethics in connection with the production and sale of the product.
9. Protect the general interests of the dairy industry.

According to its directors, the Association is supported entirely through contributions of its members. In order to insure the quality of the product of the members, the Association has undertaken to analyze daily at its laboratory in Mexico City a sample of the product of each member. According to the Secretary of the Association, the method followed is for one of the regular delivery trucks of the producer to stop at the offices of the Association each day where an employee of the latter selects a quart of milk, being careful not to take the bottle from the same position in the truck. This sample is subjected to chemical and bacteriological analyses and a record is kept of each producer. These records are available

to government officials upon request. Should the quality of the product of any member decline, the Association investigates the reasons and reports to the producer on the causes of the decline and the steps that might be taken to eliminate them. According to the regulations of the Association, members may be expelled by decision of the Executive Committee, ratified by a two-thirds majority of the General Assembly, for violating the Associations' standards for commercial ethics and "particularly when as a result of the analyses practiced at the laboratories, it appears that they adulterate or modify, in any manner, the quality of the milk placed on sale, even though it may be through chemical processes not injurious to health."

Among the projects of the association for developing the dairy industry is the establishment in Mexico of a national association of breeders of Holstein cattle. As mentioned above, there are at present no dairy breeders' organizations in the country.

A semi-governmental agency has also been established recently for the purpose of promoting the improvement of the dairy industry. This is the Permanent Commission for Vigilance of the Milk Industry (Comision Permanente de Vigilancia de la Leche) created on March 17, 1951. The Commission is composed of fifteen members including representatives of governmental agencies and private organizations interested in the dairy industry as well as members of the press. The governmental agencies represented include the Ministry of Agriculture, the Ministry of Health and Welfare, the Ministry of National Economy, and the Department of the Federal District. Other members include the organizations of dairymen mentioned above, the Union of Dairy Workers, the Union of Milk Distributors, the Institute of Nutrition, and a representative of the pasteurizing plants. The Commission's program, as published in the Mexico City press on March 9, 1951, is as follows:

1. Cooperate with the authorities in the solution of the milk problem.
2. Expand the production and consumption of pure and sanitary milk.
3. Increase the number of dairy cattle through imports of registered stock.
4. Affirm and expand the organization of dairymen on the basis of high standards of commercial ethics, thus protecting the public interest and the reputation of the industry.
5. Establish guarantee prices for the producer.
6. Urge the regulation of the importation and use of powdered milk.
7. Obtain the establishment of commercial specifications, ceiling prices and supply quotas for feeds, with the object that prices may correspond to commercial quality.

8. Cooperate with the Government in the establishment of a sufficient volume of credit, for long terms and at low rates of interest, for financing the dairy industry.

9. Cooperate in reinstituting and developing Livestock Expositions.

10. Cooperate with the National University of Mexico to bring about the establishment of an Institute of Animal Nutrition within the National School of Veterinary Medicine.

11. Promote the establishment of livestock insurance.

12. Constitute a fund for regulating the milk market.

13. Cooperate with the authorities for the development of an educational campaign concerning milk consumption and sanitation.

14. Protect the interests of consumers through a permanent vigilance campaign under the direction of the sanitary authorities, denouncing publicly, through the press, irregularities on the part of dairymen.

The establishment of the Commission represents an attempt to obtain the cooperation of the dairy industry with the authorities in improving standards of milk production and expanding the output of the industry. The purpose of including representatives of the press was to insure that the efforts of the Commission would receive adequate publicity. This was particularly desired by the authorities in connection with violations of sanitary standards by dairymen. It is believed by the authorities that some milk producers may persist in their practice of adulterating milk even if they have to pay a fine occasionally but that most of these producers would give up such practice when faced by the possibility of public denunciation. Since it started functioning on May 23, 1951, the Commission has conducted several inspections of milk at dairies, on highways, at pasteurizing plants, and at restaurants. These inspections have resulted in the condemnation of nearly 20,000 quarts of milk and the imposition of about \$3,468 in fines.

APPENDIX A.

MEXICAN DAIRY STATISTICS

TABLE 1. PESO: Average value in United States currency, 1940 through 1951.

Year	:	Cents
1940	:	18.55
1941	:	20.54
1942	:	20.57
1943	:	20.58
1944	:	20.58
1945	:	20.58
1946	:	20.58
1947	:	20.58
1948	:	18.86
1949	:	12.62
1950	:	11.57
1951	:	11.56

TABLE 1A. Comparison of Milk Production and Number of Head per Farm for Registered and Not Registered Dairy Farms in the Mexico City Milkshed.

	: No. :	:	:	: Total :	Pro- :	No. of
	: of :	Cows :	: Total :	Pro- :	duction:	Head
	: Dairy:	and :	Bulls:	Dairy :	duction:	per
	Farms:	Calves:	Cattle:	per :	per :	Farm
	:	:	:	: Day :	Farm :	
	Head	Head	Head	a/Liters	a/Liters	b/
Registered: c/						
Federal District	129 22,273	509 22,782	143,386	1,112	177	
State of Mexico	129 37,984	858 53,842	231,372	1,794	301	
State of Puebla	1 347	10 357	3,000	3,000	357	
State of Tlaxcala	2 344	9 353	2,100	1,050	177	
State of Hidalgo	1 310	5 315	2,000	2,000	315	
All registered	262 61,258	1,391 62,649	381,858	1,457	239	
Not registered:						
Federal District	1,083 8,576	238 8,814	68,360	63	8	
State of Mexico	168 2,105	56 2,161	17,368	103	13	
All not registered	1,251 10,681	294 10,975	85,728	69	9	
Total	1,513 71,939	1,685 73,624	467,586	310	49	

a/ One liter equals 1.0567 quarts or 2.272 pounds of milk. b/ Including cows, calves and bulls. c/ Includes dairy farms registered with the Departamento de la Administracion Sanitaria de la Leche en el Distrito Federal, of the Ministry of Health.

SOURCE: Based on data from Department mentioned in footnote b/ above.

TABLE 1B. Fresh Milk: Consumption in the Federal District of Mexico, 1940-1951.

Year :	Total :	Pasteurized:	Certified :	Percent : Pasteurized : of Total :	Consumption : per Capita a/
	1000 Liters	1000 Liters	1000 Liters		Liters
1940	89,120	39,605	49,514	44.4	49.5
1941	93,782	41,239	58,543	41.3	51.8
1942	145,306	43,897	99,410	30.6	69.9
1943	166,982	40,334	126,148	24.5	76.7
1944	157,103	38,049	119,054	25.1	68.2
1945	130,545	41,147	89,397	31.5	53.7
1946	134,271	42,633	91,638	31.8	52.5
1947	126,716	40,043	86,673	31.6	47.2
1948	120,369	55,395	64,973	46.0	42.9
1949	131,937	51,474	80,462	39.0	45.0
1950	229,658	59,073	170,585	25.7	72.1
1951	193,602	50,413	148,189	25.4	60.0

a/ Based on the following population estimates for the Federal District obtained from Oficina de Poblacion, Direccion General de Estadisticas: 1940; 1,797,561; 1941; 1,923,522; 1942, 2,049,485; 1943, 2,175,444; 1944; 2,301,405; 1945; 2,427,366; 1946; 2,553,327; 1947; 2,679,288; 1948, 2,805,249; 1949, 2931,210; 1950, 3,183,132; 1951, 3,309,093.
SOURCE: Direccion General de Estadistica.

TABLE 2. Dairy Cattle: Imports into Mexico by Country of Origin; 1940 through 1951.

Year :	Total		:United States:		Canada		: Guatemala		: Cuba	
	No. of	1000	No. of	1000	No. of	1000	No. of	1000	No. of	1000
	<u>Head</u>	<u>Pesos</u>	<u>Head</u>	<u>Pesos</u>	<u>Head</u>	<u>Pesos</u>	<u>Head</u>	<u>Pesos</u>	<u>Head</u>	<u>Pesos</u>
1940	71	16	63	15	0	0	8	1	0	0
1941	276	63	263	68	0	0	3	b/	0	0
1942	222	93	210	78	12	15	0	0	0	0
1943	264	201	255	188	9	13	0	0	0	0
1944	1,555	1,074	1,255	820	300	254	0	0	0	0
1945	6,444	5,405	5,821	4,725	623	680	0	0	0	0
1946	5,487	5,037	5,403	4,920	84	117	0	0	0	0
1947	301	281	301	231	0	0	0	0	0	0
1948	270	423	270	423	0	0	0	0	0	0
1949	399	1,102	342	953	57	149	0	0	0	0
1950	1,379	3,565	1,206	2,841	162	639	0	0	11	85
1951	783	2,598	486	1,386	297	1,213	0	0	0	0

b/ Less than 500 pesos.

SOURCE: Direccion General de Estadistica.

TABLE 3. Milk, Fresh: Imports into Mexico by Country of Origin; 1940 through 1951.

Year :	Total :		United States :		Other Countries :	
	<u>a/ Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>
1940	19,082	11,563	18,014	9,688	1,068	1,875
1941	14,616	11,008	14,565	10,921	51	87
1942	11,025	5,074	10,975	5,044	50	30
1943	4,751	2,332	4,751	2,332	0	0
1944	41,304	15,596	41,133	15,530	171	66
1945	17,822	9,923	17,802	9,895	20	28
1946	6,750	5,885	6,613	5,604	137	281
1947	143,745	159,172	142,549	151,071	1,196	8,101
1948	49,825	51,534	49,825	51,534	0	0
1949	42,651	83,019	42,651	83,019	0	0
1950	22,311	49,128	21,791	43,159	520	5,969
1951	19,663	55,137	18,523	41,809	1,135	13,328

a/ One kilo equals 2.2046 pounds.

SOURCE: Direccion General de Estadistica.

TABLE 4. Milk, Condensed: Imports into Mexico by Country of Origin; 1940 through 1951.

Year :	Total :		United States :		British Honduras :		Others :	
	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>
1940	6,570	6,556	3,070	2,798	3,500	3,758	0	0
1941	4,775	4,089	3,321	2,744	1,346	1,271	108	74
1942	3,269	3,386	3,140	3,201	106	160	23	25
1943	3,416	4,226	3,396	4,201	20	25	0	0
1944	15,005	21,649	14,573	20,969	430	675	2	5
1945	63,538	83,748	63,074	82,912	440	800	24	36
1946	5,771	10,273	3,586	6,084	1,184	2,354	1,001	1,835
1947	20,288	39,587	19,428	36,243	791	3,304	69	40
1948	30,345	90,170	30,254	89,897	88	220	3	53
1949	2,195	9,586	2,193	9,568	0	0	2	18
1950	876	4,643	874	4,629	2	14	0	0
1951	930	6,021	908	5,855	22	166	0	0

SOURCE: Direccion General de Estadistica.

TABLE 5. Milk, Evaporated: Imports into Mexico by Country of Origin; 1940 through 1951.

Year :	Total		: United States :		Argentina :		Others	
	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos
1940	233,744	174,618	233,672	174,569	0	0	72	49
1941	622,804	504,037	614,979	488,474	7,825	15,563	240	260
1942	335,943	320,115	365,773	319,943	0	0	170	172
1943	339,695	314,258	339,663	313,932	0	0	232	276
1944	757,236	749,483	755,546	743,939	0	0	1,690	2,544
1945	2,663,728	2,701,514	2,657,720	2,636,813	0	0	6,008	14,701
1946	596,745	452,037	595,020	448,778	0	0	1,735	3,259
1947	1,681,549	2,169,914	1,680,768	2,168,691	280	452	501	801
1948	455,546	714,475	455,370	714,155	0	0	176	320
1949	42,501	95,927	42,301	94,671	0	0	200	1,257
1950	66,059	151,850	66,058	151,835	0	0	1	15
1951	52,317	136,925	51,872	135,742	0	0	445	1,183

SOURCE: Direccion General de Estadistica.

TABLE 6. Milk, Powdered, in Containers up to 5 kilos: Imports into Mexico, by Country of Origin; 1940 through 1951.

Year :	Total		United States		Switzerland		Denmark	
	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos
1940	43,595	126,093	35,983	117,196	5,544	4,212	1,809	4,034
1941	108,353	301,747	98,553	276,057	4,800	13,692	0	0
1942	178,044	635,747	178,043	635,745	0	0	0	0
1943	175,691	608,455	175,680	608,415	0	0	0	0
1944	475,317	1,636,659	472,770	1,631,185	0	0	0	0
1945	1,006,621	3,425,773	1,006,259	3,424,705	0	0	0	0
1946	3,165,212	12,591,595	3,163,074	12,584,367	2	12	0	0
1947	3,084,204	13,232,281	3,049,015	13,068,910	0	0	0	0
1948	2,739,841	13,447,702	2,707,841	13,299,292	0	0	0	0
1949	1,676,171	10,943,966	1,676,049	10,943,055	14	217	1	6
1950	1,238,381	8,502,865	1,236,539	8,489,870	6	108	76	441
1951	999,612	8,699,807	839,184	6,976,667	0	0	1,355	9,167

Year :	France		Canada		Italy		Argentina		Others	
	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos
1940	0	0	0	0	0	0	0	0	259	651
1941	0	0	10	25	4,875	11,720	0	0	115	253
1942	0	0	0	0	0	0	0	0	1	2
1943	0	0	0	0	0	0	0	0	11	40
1944	0	0	0	0	0	0	2,446	4,970	101	504
1945	0	0	0	0	0	0	14	25	348	1,043
1946	0	0	676	1,321	0	0	1,340	5,100	120	795
1947	35,180	163,296	0	0	0	0	0	0	9	75
1948	0	0	32,000	148,410	0	0	0	0	0	0
1949	0	0	0	0	0	0	0	0	107	688
1950	1,727	12,011	5	68	0	0	6	96	22	271
1951	0	0	159,030	1,713,764	0	0	2	17	41	192

SOURCE: Direccion General de Estadistica.

TABLE 7. Milk, Powdered, in Containers over 5 kilos each: Imports into Mexico, by Country of Origin; 1940 through 1951.

Year :	Total		United States		: Netherlands		: Denmark	
	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos	Kilo	Pesos
1940	107,784	138,980	76,195	100,819	21,124	21,195	8,776	14,384
1941	228,141	305,261	228,069	305,164	0	0	0	0
1942	81,464	155,236	78,454	151,799	0	0	0	0
1943	48,198	119,310	20,707	82,452	0	0	0	0
1944	221,752	555,305	8,760	32,234	0	0	0	0
1945	210,591	554,496	207,483	545,926	0	0	0	0
1946	878,195	2,247,936	878,005	2,247,590	0	0	0	0
1947	2,850,507	8,877,977	2,817,522	8,826,009	0	0	0	0
1948	2,773,082	7,918,149	2,773,082	7,918,149	0	0	0	0
1949	2,340,471	5,461,944	2,282,855	5,318,125	0	0	0	0
1950	3,036,754	7,179,342	2,045,780	4,883,186	3,093	14,447	9,112	22,663
1951	4,725,363	12,517,532	4,609,663	12,121,797	20,895	117,006	5,280	11,918

Year :	Switzerland		Argentina		: Guatemala	
	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos
1940	0	0	0	0	0	0
1941	0	0	72	97	0	0
1942	0	0	3,010	3,437	0	0
1943	0	0	10,432	14,603	17,053	22,255
1944	0	0	206,564	513,250	6,428	9,821
1945	0	0	3,081	8,500	0	0
1946	0	0	0	0	0	0
1947	0	0	0	0	0	0
1948	0	0	0	0	0	0
1949	0	0	0	0	0	0
1950	259,385	627,865	0	0	0	0
1951	10,720	48,635	0	0	0	0

(Continued)

TABLE 7. Milk, Powdered, in Containers over 5 kilos each: Imports into Mexico, by Country of Origin; 1940 through 1951.

Year :	Canada		Germany		Great Britain		Others	
	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos
1940	0	0	0	0	0	0	1,689	2,582
1941	0	0	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	0
1943	0	0	0	0	0	0	0	0
1944	0	0	0	0	0	0	0	0
1945	0	0	0	0	0	0	0	0
1946	0	0	0	0	0	0	27	70
1947	30,925	42,253	0	0	0	0	190	346
1948	0	0	0	0	0	0	2,000	9,715
1949	30,366	91,305	0	0	0	0	0	0
1950	691,246	1,568,428	26,800	59,540	27,250	52,514	0	0
1951	68,738	200,900	10,067	17,276	907	2,063	431	1,150
					0	0	0	0

a/ Japan.

SOURCE: Direccion General de Estadistica.

TABLE 8. Butter: Imports into Mexico, by Country of Origin;
1940 through 1951.

Year :	Total		United States		Denmark	
	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>
1940	50,701	160,675	45,906	142,394	4,612	17,950
1941	53,336	166,245	52,438	164,094	0	0
1942	43,999	123,816	29,548	84,731	0	0
1943	13,393	45,446	9,739	33,958	0	0
1944	16,132	63,521	271	952	0	0
1945	18,930	88,960	1,583	6,576	0	0
1946	252,187	1,340,606	2,424	13,405	151,715	914,080
1947	78,561	592,618	44,554	328,242	26,377	212,725
1948	74,838	838,103	55,452	643,336	18,390	132,227
1949	34,705	453,884	17,880	232,438	13,959	134,910
1950	44,550	570,944	13,029	196,319	29,723	354,274
1951	39,393	463,657	10,163	141,932	26,421	294,274

Year :	Argentina		Others	
	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>
1940	0	0	183	331
1941	705	1,509	193	642
1942	14,540	41,551	111	534
1943	3,456	10,495	200	1,003
1944	13,523	49,244	2,338	14,324
1945	16,334	74,765	1,008	7,619
1946	75,786	393,823	2,262	19,293
1947	3,468	21,462	3,962	30,119
1948	0	0	996	12,540
1949	0	0	2,866	36,486
1950	598	5,539	1,200	14,782
1951	0	0	2,804	30,401

SOURCE: Direccion General de Estadistica.

TABLE 9. Cheese, Cheddar: Imports into Mexico, by Country of Origin; 1940 through 1951.

Year :	Total		: United States		: Denmark		: Others	
	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>
1940	not reported separately							
1941	"	"	"					
1942	"	"	"					
1943	2	18	2	18	0	0	0	0
1944	252	1,493	249	1,488	0	0	3	5
1945	520	1,864	520	1,864	0	0	0	0
1946	467	2,782	467	2,782	0	0	0	0
1947	627	3,812	564	3,276	0	0	63	536
1948	117,304	691,734	117,299	691,714	0	0	5	20
1949	101,459	667,657	100,146	658,226	1,313	9,431	0	0
1950	131,062	925,203	131,062	925,203	0	0	0	0
1951	3,949	30,618	3,949	30,618	0	0	0	0

SOURCE: Direccion General de Estadistica.

TABLE 10. Cheese, Others a/: Imports into Mexico, by Country of Origin; 1940 through 1951.

Year :	Total		: United States		: Netherlands	
	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>	<u>Kilos</u>	<u>Pesos</u>
1940	241,108	658,321	101,685	272,862	80,869	247,182
1941	210,515	581,786	176,263	485,859	0	0
1942	201,555	601,262	184,376	555,521	0	0
1943	101,411	322,425	77,777	264,739	0	0
1944	125,881	473,363	74,038	287,854	0	0
1945	202,597	759,415	140,927	503,064	0	0
1946	259,559	1,162,334	156,898	610,737	17,548	124,977
1947	636,966	3,590,132	332,742	1,640,538	210,837	1,416,366
1948	293,074	2,174,098	60,600	450,389	120,616	906,001
1949	215,490	2,010,541	41,200	365,522	92,064	809,057
1950	293,348	2,456,063	50,763	409,476	131,131	983,941
1951	455,926	3,876,745	108,868	936,698	218,955	1,649,404

a/ From 1940 through 1942, all imports of cheese are included. Since then, imports of Cheddar cheese are reported separately as shown in Table 9.

TABLE 10. Cheese, Other a/: Imports into Mexico, by Country of Origin; 1940 through 1951.

Year :	Argentina		Switzerland		Cuba		France	
	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos
1940	1,575	2,502	3,908	17,177	0	0	2,981	8,403
1941	29,058	72,866	4,185	18,827	9	24	0	0
1942	16,592	42,318	437	2,856	1	5	0	0
1943	20,224	39,969	475	2,982	482	2,338	0	0
1944	33,718	108,108	0	0	15,574	63,024	0	0
1945	49,259	180,339	0	0	0	0	0	0
1946	42,652	174,145	55	368	247	1,550	2,037	14,575
1947	47,805	216,710	19,384	147,502	16	40	1,696	11,222
1948	18,508	80,802	61,507	518,046	0	0	2,028	21,819
1949	25,777	221,981	37,756	403,223	18	184	2,595	32,562
1950	21,785	179,284	49,398	551,781	0	0	1,549	16,825
1951	21,730	171,004	61,242	722,445	0	0	1,794	28,913

a/ From 1940 through 1942, all imports of cheese are included. Since then, imports of Cheddar cheese are reported separately as shown in Table 9.

TABLE 10: Cheese, Other a/: Imports into Mexico by Country of Origin; 1940 through 1951.

Year :	Denmark		Italy		Finland		Others	
	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos	Kilos	Pesos
1940	3,240	8,919	8,536	36,724	10,355	18,001	28,159	46,551
1941	0	0	0	0	0	0	1,000	4,210
1942	0	0	0	0	0	0	149	562
1943	0	0	0	0	0	0	2,453	12,397
1944	0	0	0	0	0	0	2,551	14,377
1945	0	0	0	0	0	0	12,411	76,012
1946	33,773	195,758	0	0	0	0	6,349	40,224
1947	18,210	122,167	0	0	0	0	6,276	35,587
1948	25,632	171,489	225	2,216	0	0	3,958	23,336
1949	7,185	64,212	6,541	90,563	1,083	9,368	1,271	13,869
1950	24,016	174,017	7,060	76,368	2,974	25,769	4,672	38,602
1951	26,434	198,645	6,804	75,589	6,582	64,816	3,517	29,228

a/ From 1940 through 1942, all imports of cheese are included. Since then, imports of Cheddar cheese are reported separately as shown in Table 9.

SOURCE: Direccion General de Estadistica.

TABLE 11. Dairy Products: Average Prices in Mexico City, Annual 1940-1951.

Year	Milk, Retail	Cheese, Fresh	Wholesale Aged	Butter, Wholesale
	Pesos per Liter		Pesos per Kilogram	
1940	.30	.96	1.41	1.86
1941	.31	.95	1.49	2.08
1942	.34	1.02	1.66	2.45
1943	.42	1.39	2.37	3.49
1944	.62	3.17	3.86	3.87
1945	.57	3.59	4.04	4.47
1946	.70	3.00	4.29	5.36
1947	.70	3.25	4.77	6.00
1948	.71	4.36	4.54	5.78
1949	.75	4.73	4.97	5.86
1950	.80	4.29	5.97	7.23
1951	.93	3.99	6.63	7.40

SOURCE: Direccion General de Economia Rural.

APPENDIX B.

Translation of Chapter VIII of the Regulations
for the Registration of Foods, Beverages, and
Similar Products 1/

Chapter VIII

Milk and derived products

ARTICLE 82. Milk fulfilling the following requirements shall be admitted for registration under the name of evaporated milk:

- I. To come from healthy animals, indicating the species of such animals.
- II. To have lost at least 58 percent of its water content.
- III. To be homogenized in order to break and stabilize the fat globules.
- IV. Not contain live bacteria.

ARTICLE 83. For the purposes of these Regulations, it shall be understood as dry or powdered milk that which, having lost almost all its water content, has been reduced to powdered form and fulfills the following requirements:

- I. To come from healthy animals, indicating the species of such animals.
- II. Not contain more than 10,000 live bacteria per gram of the product.
- III. Not contain pathogenic bacteria.

ARTICLE 84. Among the types of milk to which the preceding article refers. The following are authorized:

- I. Whole dry milk. That containing more than 24 percent fat.
- II. Partially skimmed dry milk. That containing from 8 to 24 percent fat.
- III. Skimmed dry milk. That containing less than 8 percent fat.

The addition of up to 7 percent of lactides or citrates, as well as of malt, saccharose, dextromaltose, or lactose, is permitted.

1/ Reglamento para el Registro de Comestibles, Bebidas y Similares, contained in a decree dated February 20, 1941, and published in the Diario Oficial of March 5, 1941.

ARTICLE 85. By condensed milk shall be understood that which has lost at least 60 percent of its water content and to which has been added from 40 to 50 percent of saccharose.

It shall not contain more than 5,000 live bacteria per gram of the product, nor pathogenic bacteria.

ARTICLE 86. By sour milk shall be understood that which after sterilization has been subjected to lactic fermentation by bacteria.

Such milk shall be admitted for registration only if:

I. It has an acidity lower than 1.2 percent in lactic acid.

II. It does not contain pathogenic micro-organisms.

ARTICLE 87. In the case of milks referred to in articles 82, 83, and 85, it is permitted:

I. To extract part of the hydrocarbonated fat or protein content.

II. To add food substances, which in the judgment of the Department of Public Health, are not harmful to health.

In either case, the formula of the composition of the product shall be shown on the container.

ARTICLE 88. The products referred to in the preceding articles of this chapter, shall be prepared precisely with milk pasteurized, boiled or sterilized through some procedure accepted by the Department of Health and it shall be stated on the containders, in a code to be announced by the Department of Public Health:

I. The date of their preparation.

II. The number of the corresponding lot.

ARTICLE 89. Under the name of cheese shall be admitted for registration such products derived from milk which fulfill the following requirements:

I. To be made from the ripened curd of milk obtained through the addition of rennet or through acidification.

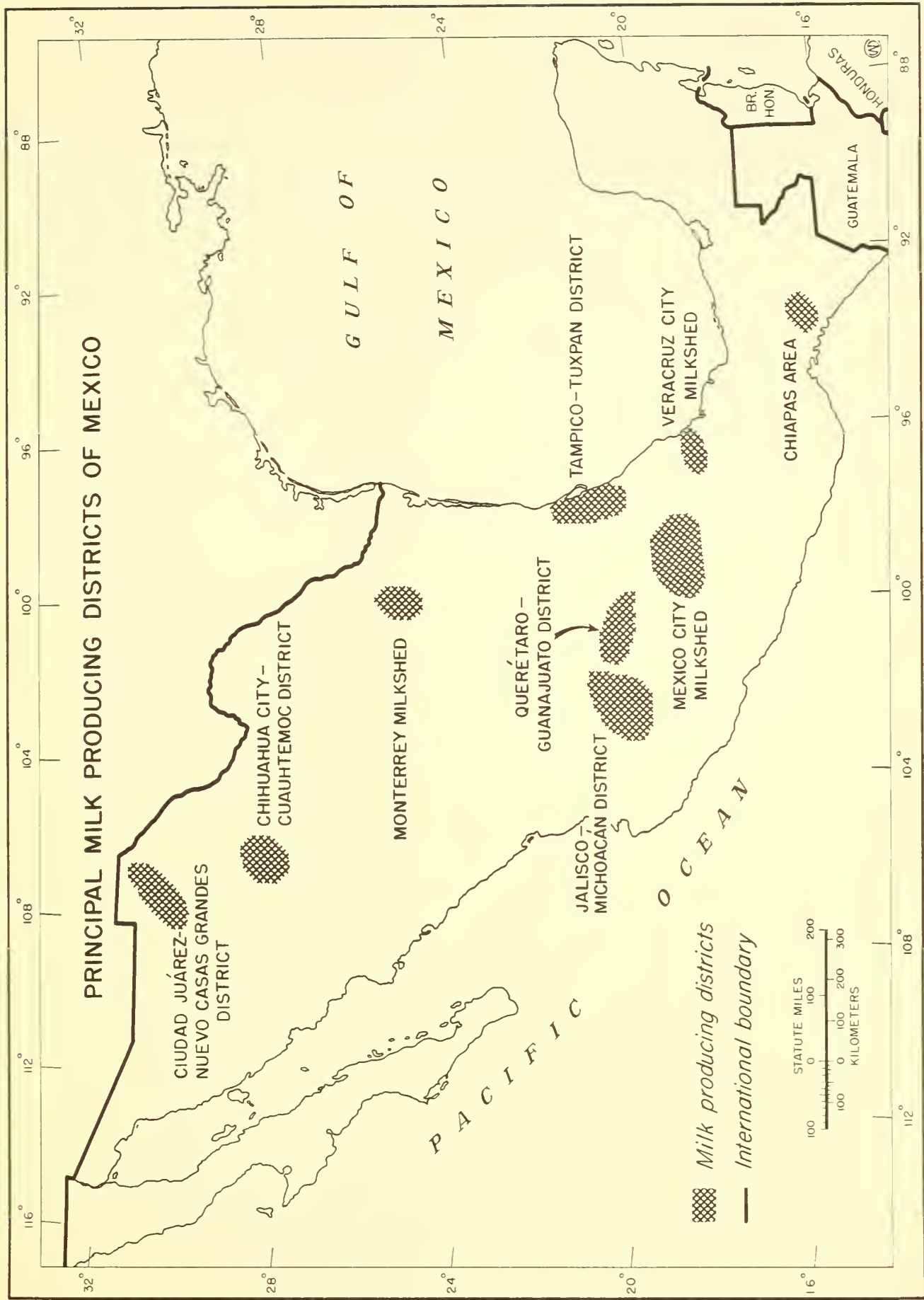
II. Be prepared with milk from healthy animals, pasteurized or boiled.

III. Not contain substances foreign to the composition of milk, except for coloring substances authorized by this Department and substances produced by the fermentation or putrefaction characteristic of the process of preparation.

ARTICLE 90. In the preparation of cheese the following are prohibited:

I. Any starches.

II. Substances which in the judgment of the Department of Health may be harmful to health.





FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD 2-52

April 21, 1952

NETHERLANDS MILK PRODUCTION DECLINES, SMALLER EXPORTS OF DAIRY PRODUCTS EXPECTED IN 1952

Milk production in The Netherlands, a major source of international supply of dairy products, declined slightly (about 1.8 percent) in 1951 from the record volume of 12.7 billion pounds in 1950. This decline was attributed principally to a late development in pastures, a shortage of feedstuffs, the poor condition of many cattle early in the year, and a widespread outbreak of foot-and-mouth disease toward the end of the year. Because of that country's importance in the world supply of butter, cheese, evaporated and condensed milk, and dry whole milk, there is considerable interest in the possible extent of its recovery, if any, in milk production and its probable exports of dairy products in the near future.

According to information recently received from the American Embassy at The Hague, milk production in the early months of 1952 is continuing the decline in evidence last year. January milk production was 1.3 percent below that in the same month of 1951 and five percent below January 1950. February production was seven percent lower than last year and 11 percent below February 1950. The chief causes are apparently the slaughter of older cows in the tuberculosis campaign, and the effects of the foot-and-mouth disease outbreak. The latter disease has evidently been contained and new outbreaks are declining, but its effects will probably be reflected in lower production throughout the first half of 1952.

According to preliminary predictions of the Control Board for Dairy Products, a sharp decline is expected in the export of butter but only moderate declines may be expected in exports of most other dairy products in 1952. The extent of the decline of butter exports is expected to reflect in part the extent of any increase in the exports of fluid milk and cream, amounting to about 125 million pounds (milk equivalent) in 1951, nearly one-third of which was fluid milk taken by the United States Armed Forces abroad. The following table shows approximately the Board's prediction of the principal Netherlands exports for 1952, together with reported exports in 1951 and 1950:

Item	Predictions for 1952	Reported exports in:	
	Mil. lbs.	1951	1950
		Mil. lbs	Mil. lbs.
Total cheese	155.0	160.2	154.0
Butter	100.0	119.1	142.5
Condensed & evaporated milk <u>1/</u>	375.0	386.8	336.8
Powdered milk <u>2/</u>	44.0	44.9	36.4
Casein	6.6	7.0	3.1

1/ Includes condensed skim milk. 2/ Includes spray and roller nonfat dry milk solids.

H. W. SPIELMAN
KARACHI, PAKISTAN
% OFAR, USDA
3-9-50
FAC-L

- 2 -

The Netherlands is consistently the low bidder among European dairy countries. Only in England is there strong competition price-wise from Danish cheeses. On the world market, Dutch products meet serious competition only from the U. S. A. in Far Eastern markets, particularly for evaporated and sweetened condensed milk in cans.

Minimum prices for export are fixed by the Control Board for Dairy Products. These prices vary somewhat depending on the destination. Minimum prices for exports to Benelux partners, Belgium and Luxembourg, are usually higher than those to other areas because of special levies which increase the price. These are made to bring Dutch prices into line with the consistently higher prices encouraged by Belgian agricultural policy. Minimum prices on dairy products to the U. S. A. and Canada are fixed for cheese exports only.





FOREIGN AGRICULTURE CIRCULAR

OFFICE OF FOREIGN AGRICULTURAL RELATIONS
UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C.

FD 1-52

March 24, 1952

WORLD PRODUCTION OF DAIRY PRODUCTS, FOURTH QUARTER, AND ANNUAL, 1951

FOURTH QUARTER

Over-all production of manufactured dairy products in many of the principal producing countries of the world in the fourth quarter of 1951 declined below comparable 1950, according to information available to the Office of Foreign Agricultural Relations. Butter, canned milk and dried milk production decreased markedly in this period, while cheese output dropped only slightly below the level of a year ago.

Varying factors contributed to a decline in milk production in several countries, which in turn affected the output of dairy products by limiting the quantity of milk available for utilization in manufacturing. In Australia, where the two important dairying States of Queensland and New South Wales had not recovered from the devastating drought and bush fires which ruined pastures and depleted herds, milk production was greatly curtailed. Pastures in Argentina were very dry early in the quarter, resulting in lower milk output than in the same period last year.

An outbreak of foot-and-mouth disease affected milk production in Denmark and to some extent in the Netherlands. Lower output in Sweden was attributed to the reduced profitability of milk production due to higher feed costs. A drop in cow numbers in the United Kingdom as a result of the relatively unfavorable controlled milk prices caused a decline in the output of milk in this quarter.

Dairying countries in which milk production was maintained at or slightly exceeded last year's level were New Zealand, the Netherlands, Switzerland, Canada and the United States.

Butter production in factories in the final quarter of 1951 was 6 percent below the same quarter of 1950. While some gains in output were reported in this period, they were not sufficient to offset the combined decreases in several of the heavier producing countries. In New Zealand, adequate and well distributed rainfall greatly aided dairying, and butter production was up in

the fourth quarter compared with a year earlier. Butter output in the Union of South Africa showed an increase, although production in the final month of the quarter tapered off rapidly due to the alarming drought that set in throughout the Union and deteriorated pastures and forage crops.

In Switzerland, butter production continued at a high level and in the October-December quarter of 1951 again exceeded comparable 1950. Western Germany was the only other country of Continental Europe in which favorable conditions in the fourth quarter were reflected in increased production.

In this Hemisphere, Canada reported a substantial rise in factory butter output in the closing quarter of 1951 when plentiful feed supplies and higher yields contributed to increased milk production.

Lower butter output in Australia in the fourth quarter was due to the drought conditions which restricted milk production. In Argentina, output of butter was down as a result of the lower supplies of milk and the practice of processors converting their operations to cheese whenever possible.

Foot-and-mouth disease in Denmark and the Netherlands reduced milk production and butter output in both countries declined. In the United Kingdom, decreased milk production and the resultant shorter supplies of milk for product manufacture caused a drop in butter production.

As a consequence of a slight decline in milk output in the United States in the fourth quarter, and the continuing strong demand for milk for fluid consumption, smaller quantities of milk were available for manufacturing purposes, and butter production fell below comparable 1950.

Cheese production in the fourth quarter of 1951 was only slightly below the same quarter a year earlier. A substantial increase in output in Argentina resulted from the marked diversion of the decreased milk supply from butter to cheese wherever practicable. Production in Denmark, the Netherlands and Switzerland increased somewhat, due to the tendency to divert milk from butter to cheese manufacture in Denmark and the Netherlands, and to a larger milk supply in Switzerland.

In Australia, decreased production of cheese reflected the unfavorable milk producing conditions that continued into the fourth quarter, while in New Zealand, the lower output was the result of the channeling of manufacturing milk supplies to butter and casein. With less milk being produced in Sweden and the United Kingdom, milk supplies for processing were curtailed and cheese production dropped in both countries. The volume of milk available for manufacture in Canada and the United States in the October-December quarter was smaller than that of the previous year, and cheese production dropped below that of fourth quarter, 1950.

Total canned milk production decreased approximately 9 percent in the 5 major producing countries in the fourth quarter of 1951, compared with the preceding year, although moderate gains were reported in Australia, the Netherlands and Canada. Output was down slightly in the United Kingdom and in the United States, which accounts for about 80 percent of the total, output was down 13 percent.

Dried milk production in the final quarter of 1951 was 12 percent below the corresponding period of 1950. Output in the Netherlands and Canada rose in the fourth quarter but not enough to offset the marked declines in Australia, Sweden, the United Kingdom and the United States.

ANNUAL

Lower milk production and continuing strong demand for milk for fluid consumption in 1951 left the year as a whole unfavorable for the output of factory dairy products for which data is available 1/, and over-all output was approximately 4 percent below that of 1950. Some decline in cow numbers and in yield per cow, resulting from adverse weather and short feed supplies, were the principal contributing factors to the decrease in milk production in 1951. This smaller production was reduced still further by the need to meet fluid milk requirements, and less milk was left for processing than in the earlier year.

Butter production in factories was down 6 percent in 1951, as compared with 1950, despite sizable increases in several countries. In New Zealand, where conditions for dairying were favorable, butter output was up throughout the year. Production in the Union of South Africa was at an all time high, and some butter was again exported. Good conditions in both Western Germany and Switzerland resulted in higher butter production in those countries than in the previous year.

The lowest butter output in Australia since 1944 was due to the reduced milk supplies available for manufacturing. In Argentina, decreased milk supplies and the relative profitability of cheese production resulted in smaller quantities of milk being available for butter. Output in Ireland was down each month of 1951 until September, and although there was some improvement from then to the end of the year, it was necessary to import a very substantial quantity to cover winter requirements. Lower milk production and the consequent reduced supplies of milk for manufacturing purposes largely accounted for the decline in factory butter output in Denmark, the Netherlands, Sweden, the United Kingdom, Canada and the United States.

Over-all cheese production in 1951 declined 2 percent, although there were some significant increases. In the Netherlands, the tendency to expand the manufacture of cheese with a higher fat content continued in 1951 and was

1/ See accompanying table.

responsible for most of the increase in total cheese output that occurred in that country. Larger quantities of milk were used for cheese in Denmark in 1951, and cheese production was considerably above that of 1950. Output in Sweden also showed a gain over the earlier year. In the Union of South Africa, cheese production set a record, although demand exceeded supply during most of the year, and partial rationing was resorted to at various times to preclude any serious shortage. Output was down in Australia, New Zealand, Argentina, Switzerland, the United Kingdom, Canada and the United States, reflecting the smaller quantity of milk available for manufacturing.

Total output of canned milk in 1951 was just under that of 1950, with increases in the Netherlands and Canada almost offsetting the decreased production in the United States and the United Kingdom. In Australia, output was about the same as that of a year ago.

Dried milk production was down 15 percent from the 1950 level, with Canada the only country in which output was above that of the preceding year. Major decreases occurred in Australia, the Netherlands and the United States, accounted for in each instance by sharp declines in output of the more heavily produced nonfat dry milk solids as a consequence of lower butter production. Total dried milk in Sweden and the United Kingdom in 1951 also dropped below that of 1950.

Prospects for dairy production in the Southern Hemisphere in the early months of 1952 are considered good only in New Zealand, where conditions continue to be favorable, and in the Union of South Africa, where the drought was broken in late February. Australia has experienced a very unsatisfactory summer season to date. Although some of the drought-stricken areas have recently received beneficial rains, no substantial increase in milk production is expected until late this year, since many cows have dried off and others are far advanced in their lactation period. In Argentina, pastures are deteriorating because of insufficient rains.

In Western Europe, the incidence of foot-and-mouth disease appears to be under control. The recent downward trend in cow numbers in Denmark which was aggravated by the presence of this disease at the end of the year, suggests that in 1952 production of milk and milk products may be a little less than in 1951. Output in Sweden in the current year is expected to be somewhat lower than that of last year, due to above-normal slaughter, reduced use of commercial feed because of high prices, and below-normal supply of hay.

Feed supplies in the United Kingdom are generally satisfactory, the winter so far has been mild, and there has been ample roughage with adequate supplies of rationed concentrates. Dairy animals are generally reported to be in very good condition. However, the government-controlled milk prices are not considered adequate to encourage any increase in milk cow numbers.

In Canada, farms are well supplied with home-grown feed, and the increased volume of hay caused a slight price reduction from last year, although this favorable situation has been partially offset by increased prices for mill-feeds and protein supplements. Milk production in the United States probably will be somewhat smaller than in 1951. Fluid milk consumption is expected to expand still further, resulting in lower supplies being available for product manufacture.

---By Regina M. Murray, based in part upon U.S. Foreign Service reports.

DAIRY PRODUCTS: Output in principal producing and exporting countries,
4th quarter (calendar) 1951, with comparisons

Country and product	Average 1934-38	Total		1950		1st quarter		2nd quarter		1951		4th quarter		Fourth Quarter 1951/1950
		pounds	1950	pounds	1,000	pounds	1,000	pounds	1,000	pounds	1,000	pounds	Percent	
Butter														
Canada.....	1/ 254,774	2/ 261,464	2/ 257,604	2/ 44,358	2/ 25,365	2/ 84,815	2/ 99,875	2/ 142,036	2/ 107	2/ 47,549	2/ 107	107		
United States.....	1,673,328	2/ 1,386,290	2/ 1,214,685	2/ 242,692	2/ 260,235	2/ 379,315	2/ 349,860	2/ 225,275	2/ 93	2/ 225,275	2/ 93	93		
Belgium.....	46,179	2/ 3/ 71,250	2/ 14,506	2/ 11,918	2/ 81,129	2/ 112,655	2/ 101,191	2/ 77,602	2/ 88	2/ 77,602	2/ 88	88		
Denmark.....	400,660	2/ 394,623	2/ 372,577	2/ 87,963	2/ 116,570	2/ 171,611	2/ 179,783	2/ 142,036	2/ 108	2/ 142,036	2/ 108	108		
France.....	4/ 5/ 444,888	2/ 496,000	2/ 610,000	2/ 131,785	2/ 3,326	2/ 22,444	2/ 32,425	2/ 11,805	2/ 88	2/ 11,805	2/ 88	88		
Germany, Western.....	360,000	2/ 570,551	2/ 180,644	2/ 38,150	2/ 32,041	2/ 61,998	2/ 56,167	2/ 30,438	2/ 80	2/ 30,438	2/ 80	80		
Ireland.....	89,400	2/ 82,672	2/ 25,472	2/ 3,293	2/ 4,630	2/ 9,279	2/ 7,685	2/ 7,685	2/ 88	2/ 7,685	2/ 88	88		
Netherlands.....	201,000	2/ 205,497	2/ 234,349	2/ 50,082	2/ 49,901	2/ 67,965	2/ 70,988	2/ 45,495	2/ 91	2/ 45,495	2/ 91	91		
Norway.....	24,930	2/ 25,472	2/ 55,115	2/ 9,482	2/ 9,034	2/ 12,308	2/ 17,295	2/ 16,478	2/ 174	2/ 16,478	2/ 174	174		
Sweden.....	151,309	2/ 239,356	2/ 11,700	2/ 2,284	2/ 3,181	2/ 4,077	2/ 3,136	2/ 1,306	2/ 57	2/ 1,306	2/ 57	57		
Switzerland 4/.....	57,760	2/ 42,549	2/ 82,452	2/ 33,016	2/ 26,235	2/ 24,251	2/ 8,818	2/ 23,148	2/ 70	2/ 23,148	2/ 70	70		
United Kingdom.....	44,200	2/ 36,601	2/ 65,973	2/ 16,089	2/ 21,974	2/ 14,688	2/ 12,049	2/ 17,262	2/ 76	2/ 17,262	2/ 76	76		
Argentina.....	65,742	2/ 99,769	2/ 314,376	2/ 138,589	2/ 99,964	2/ 47,461	2/ 62,032	2/ 104,919	2/ 105	2/ 104,919	2/ 105	105		
Union of South Africa.....	27,725	2/ 59,715	2/ 410,025	2/ 165,984	2/ 124,481	2/ 38,248	2/ 73,472	2/ 173,824	2/ 107	2/ 173,824	2/ 107	107		
Australia.....	437,032	2/ 378,882	2/ 352,100	2/ 138,184	2/ 119,439	2/ 30,618	2/ 54,089	2/ 147,954	2/ 107	2/ 147,954	2/ 107	107		
New Zealand - total.....	366,049	2/ 372,515	2/ 85,260	2/ 15,423	2/ 5,010	2/ 27,197	2/ 38,424	2/ 14,629	2/ 95	2/ 14,629	2/ 95	95		
Export gradings.....	314,753	2/ 309,682	2/ 1,157,560	2/ 217,172	2/ 235,250	2/ 379,510	2/ 330,125	2/ 212,675	2/ 98	2/ 212,675	2/ 98	98		
Cheese														
Canada.....	119,924	2/ 97,654	2/ 165,345	2/ 29,761	2/ 34,833	2/ 52,469	2/ 46,516	2/ 31,527	2/ 106	2/ 31,527	2/ 106	106		
United States.....	643,234	2/ 1,192,557	2/ 1,157,560	2/ 217,172	2/ 235,250	2/ 379,510	2/ 330,125	2/ 212,675	2/ 98	2/ 212,675	2/ 98	98		
Denmark.....	68,820	2/ 129,630	2/ 562,173	2/ 45,488	2/ 37,839	2/ 87,494	2/ 86,390	2/ 47,469	2/ 104	2/ 47,469	2/ 104	104		
France.....	4/ 5/ 363,098	2/ 562,173	2/ 259,192	2/ 45,488	2/ 37,839	2/ 87,494	2/ 86,390	2/ 47,469	2/ 104	2/ 47,469	2/ 104	104		
Italy 11/.....	523,518	2/ 524,695	2/ 235,511	2/ 21,016	2/ 13,354	2/ 21,895	2/ 18,362	2/ 20,493	2/ 98	2/ 20,493	2/ 98	98		
Netherlands.....	200,000	2/ 235,511	2/ 120,007	2/ 31,571	2/ 29,441	2/ 35,902	2/ 34,171	2/ 33,609	2/ 106	2/ 33,609	2/ 106	106		
Norway.....	39,067	2/ 56,175	2/ 116,844	2/ 31,571	2/ 12,926	2/ 31,089	2/ 39,220	2/ 30,240	2/ 64	2/ 30,240	2/ 64	64		
Sweden.....	71,269	2/ 113,574	2/ 207,250	2/ 65,496	2/ 59,083	2/ 52,911	2/ 15,873	2/ 15,873	2/ 124	2/ 15,873	2/ 124	124		
Switzerland.....	111,729	2/ 124,119	2/ 97,250	2/ 12,768	2/ 24,282	2/ 34,496	2/ 30,240	2/ 81,570	2/ 91	2/ 81,570	2/ 91	91		
United Kingdom 4/.....	109,000	2/ 123,873	2/ 209,437	2/ 65,496	2/ 59,083	2/ 52,911	2/ 15,873	2/ 15,873	2/ 91	2/ 15,873	2/ 91	91		
Argentina.....	67,873	2/ 215,092	2/ 21,088	2/ 6,252	2/ 6,885	2/ 4,339	2/ 4,171	2/ 5,693	2/ 86	2/ 5,693	2/ 86	86		
Union of South Africa.....	10,195	2/ 20,567	2/ 21,088	2/ 6,252	2/ 6,885	2/ 4,339	2/ 4,171	2/ 5,693	2/ 86	2/ 5,693	2/ 86	86		
Australia.....	49,111	2/ 103,689	2/ 93,228	2/ 45,772	2/ 22,149	2/ 9,905	2/ 22,010	2/ 39,164	2/ 89	2/ 39,164	2/ 89	89		
New Zealand - total.....	201,272	2/ 238,469	2/ 227,945	2/ 103,264	2/ 76,821	2/ 26,356	2/ 32,704	2/ 82,064	2/ 92	2/ 82,064	2/ 92	92		
Export gradings.....	194,175	2/ 224,395	2/ 223,500	2/ 93,054	2/ 81,570	2/ 38,221	2/ 17,881	2/ 85,828	2/ 92	2/ 85,828	2/ 92	92		

Canned milk													
Canada <u>12/</u>	104,335	12/	287,798	12/	327,844	12/	49,623	12/	44,029	12/	120,531	12/	110,213
United States <u>12/</u>	2,469,535	12/	3,992,880	12/	3,972,115	12/	729,510	12/	855,450	12/	1,396,225	12/	1,084,025
Cuba.....	32,564	5/	49,728	5/	—	—	12,390	—	—	—	—	—	—
Denmark.....	40,785	13/	94,990	13/	—	—	—	—	—	—	—	—	—
France.....	28,953	13/	94,798	13/	393,202	13/	85,847	13/	87,726	13/	116,341	13/	98,180
Netherlands.....	304,896	13/	379,506	13/	—	—	—	—	—	—	—	—	—
Switzerland.....	14,198	13/	—	13/	178,750	13/	18,995	13/	30,823	13/	97,216	13/	32,973
United Kingdom.....	378,560	13/	297,741	13/	—	—	—	—	—	—	—	—	—
Argentina.....	—	13/	16,786	13/	—	—	—	—	—	—	—	—	—
Australia.....	41,894	8/	146,273	8/	146,603	8/	56,491	8/	35,279	8/	20,418	8/	30,989
New Zealand.....	11,273	2/	—	2/	—	—	—	—	—	—	—	—	—
Dried milk <u>14/</u>													
Canada.....	26,079	14/	67,593	14/	69,409	14/	11,847	14/	7,710	14/	22,664	14/	25,146
United States.....	203,555	5/	972,671	5/	825,625	5/	136,536	5/	177,145	5/	314,180	5/	220,950
Belgium.....	5,500	2/	9,459	2/	—	—	1,170	2/	936	2/	7,271	2/	7,018
Denmark.....	2,205	13/	24,742	13/	—	—	—	—	—	—	—	—	—
France.....	7,685	13/	15,432	13/	—	—	—	—	—	—	—	—	—
Netherlands.....	56,438	13/	91,134	13/	73,992	13/	5,655	13/	7,379	13/	30,806	13/	27,039
Sweden.....	1,351	2/	19,890	2/	17,756	2/	4,252	2/	5,691	2/	5,178	2/	4,850
Switzerland.....	2,381	2/	—	2/	—	—	—	—	—	—	—	—	—
United Kingdom.....	33,600	2/	77,952	2/	50,000	2/	5,287	2/	7,437	2/	27,238	2/	11,917
Argentina.....	15/	2/	12,454	2/	—	—	—	—	—	—	—	—	—
Australia.....	16,971	8/	167,924,401	8/	85,307	8/	16/35,386	8/	19,344	8/	11,525	8/	20,496
New Zealand.....	17,429	18/	—	18/	—	—	—	—	—	—	—	—	—

1/ Average 1935-39. 2/ Revised. 3/ Total production is estimated at 162,807,000 pounds in 1950. 4/ Total production. 5/ Less than a 5-year average. 6/ Average 1935-38. 7/ Estimated. 8/ Production year beginning July 1. 9/ Production year beginning April 1. 10/ Marketing year beginning August 1. 11/ Total cheese, and includes cheese made from the milk of sheep and goats. 12/ Both bulk and case goods. 13/ For 1937. 14/ Total dried-whole and dried-skim milk for human consumption. 15/ Quantity small. 16/ Includes infants' food, health beverages, etc. 17/ Production of dried-whole and dried-skim was 62,790,000 pounds in 1950 and 57,016,000 pounds in 1951. 18/ For 1938.

Office of Foreign Agricultural Relations. Prepared or estimated from official statistics, U. S. Foreign Service reports, and other information—March 24, 1952.

